IT is a pleasure for us to announce that the United States Power Squadrons will again follow the custom which they inaugurated several years ago and have followed annually of giving a free illustrated course in Piloting, Seamanship and Small Boat Handling in New York City. Beginning Tuesday, February 2, and continuing every Tuesday evening for ten or twelve weeks, illustrated lectures will be held at the New York Athletic Club, 6th Avenue, and Central Park South which will be open to any male adult interested in yachting or motor boating whether he be a boat owner or not. The lectures will be free and will begin promptly at eight o'clock.

Subjects of vital interest to all boatmen will be covered, such as the Rules of the Road, Proper Whistle Signals, Rights of Way, Lights for All Classes of Boats, Equipment, Government Requirements and Publications, Buoys and Aids to Navigation, the Compass and Its Use, Compass Errors, Charts and Their Use, Piloting, Flags and Colors, etc.

The lectures will be illustrated with lantern slides and will be given by prominent boatmen, members of the United States Power Squadrons.

MoToR BoatinG suggests that all motor boatmen interested in the proper and safe handling of their craft plan to attend the course of lectures.

FEBRUARY
1926

MOTOR BOATING

119 West 40th St.,
New York

No. 2
Vol. XXXVII

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NOTE: It has been found advisable to omit from this issue of MoToR BoatinG the concluding chapter of Mr. Freeman's serial By Waterways to Gotham, as well as the article by Mr. Hoag Across America By Motor Boat. However, both of these stories will be continued in the March issue of MoToR BoatinG.

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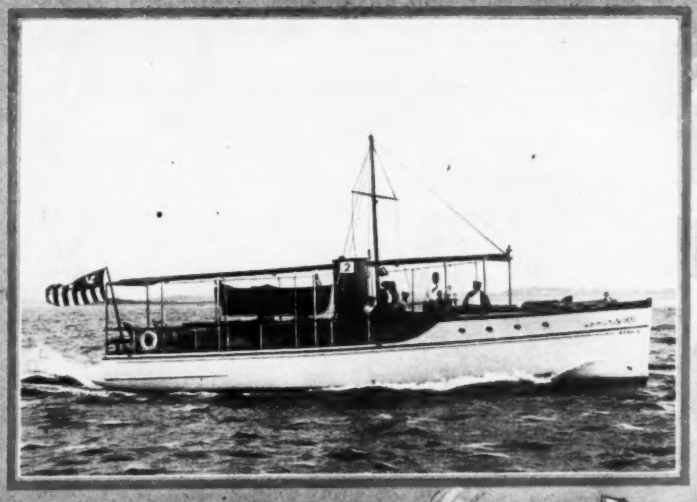
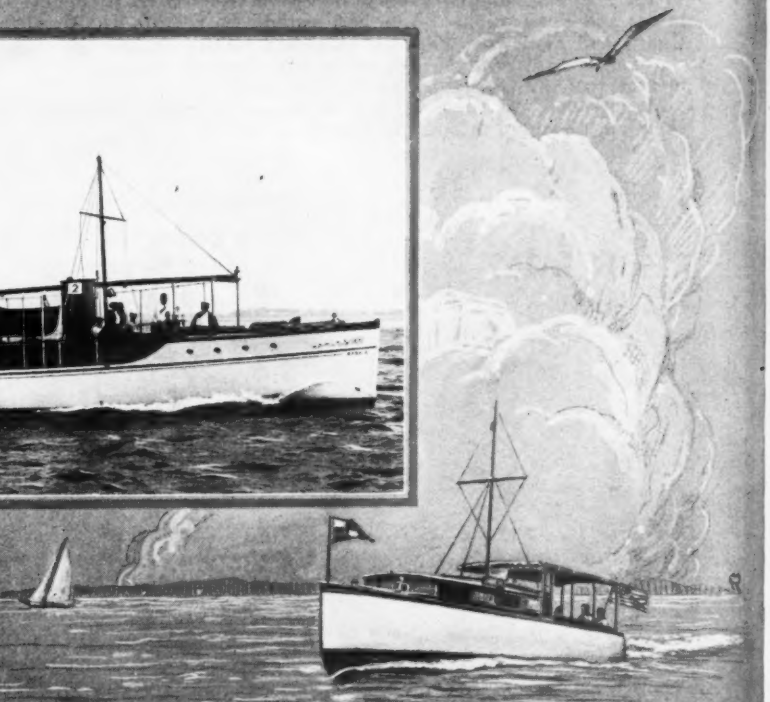
TOBIN BRONZE

REGISTERED U.S. PAT. OFF.



Spendthrift II, owned by W. R. Halsey, Orientas Yacht Club, winner of Handicap Cruiser Championship, New York to Block Island. Equipped with Tobin Bronze Shafting and underwater parts.



Tobin Bronze, manufactured solely by The American Brass Company, is recognized by leading boat builders as the most satisfactory metal for shafting and underwater parts.

Furnished in Sheets, Rods, Tubes and Turned and Straightened Shafting with the name rolled in the metal.

THE AMERICAN BRASS COMPANY
GENERAL OFFICES: WATERBURY, CONNECTICUT
In Canada: ANACONDA AMERICAN BRASS LTD
New Toronto, Ont.
World's largest manufacturers of Copper, Brass, Bronze and Nickel Silver

Advertising Index will be found on page 384

Announcing the—

Schillo Sportabout 8-220 Special

Equipped for Salt Water

The 8-220 Special brings to the motor boat field a new high standard in beauty, comfort and performance.

All practical developments and inventions in aviation and motor car building are used to the best advantage in this new craft.

An original stream line design avoids vacuum and reduces wind pressure to a minimum. The result is extreme speed with comparatively low horse power.

The 8-220 Special is capable of doing fifty-five miles per hour. Deep upholstered seats and perfect balance of the hull are responsible for its exceptional riding qualities.

The best in quality and engineering skill has been utilized to make this craft the leader in its field. Low initial cost and low upkeep.

A descriptive folder will be sent on request. Write today. Immediate delivery.

Some very desirable territory open for dealership.

SCHILLO MOTOR BOAT MFG. CO.

3900 N. Rockwell Street, Chicago, Ill.

Specifications 8-220 Special

Motor

Gasoline, eight-cylinder 220-H. P. at 2,000 R. P. M. Hispano-Suiza aviation motor. Valve in head, running in bath of oil supplied by cam shaft pressure.

Lubrication

Pressure system throughout insuring positive lubrication—indicated by gauge on dash. This system is carried through to extreme end of clutch shaft, lubricating all ball bearings as well as the thrust bearing embodied in our conversion.

Carburetion

Zenith—double-jet type. Supplied by the famous Autopulse System, eliminating all pressure pipes, gauges, etc. Electrically operated, automatically controlled by ignition switch. (Used in aviation and highly recommended by pilots).

Ignition

Special design, double distributor is used enabling ease of starting under extreme conditions.

Electric Equipment

Auto light, Starter and Generator, 12-volt capacity. Special extra heavy construction in battery.

Length Over All

52 inches (including reverse gear).

Weight

810 lbs. complete (including reverse gear).

Water Pump and Cooling

A special duplex pump circulating fresh water through motor from radiator shell contained in special design, patented outer jacket which is supplied with water taken from outboard and keeps water at an even, efficient temperature. This system makes it possible for use in salt water with no ill effects to the metals used in the motor, which in some cases, are non-resistant to salt water.

Clutch

Special design, adjustable and very accessible. Driving and driven plates are very large in diameter, insuring positive contact without slippage.

Bearings

Special non-burn bronze backed metal on crank shaft and connecting rods with thrust bearing being supported with double row, self-aligning balls.

Hull Specifications

Length Over All

25 feet, 10 inches.

Beam

6 feet, 6 inches.

Draught

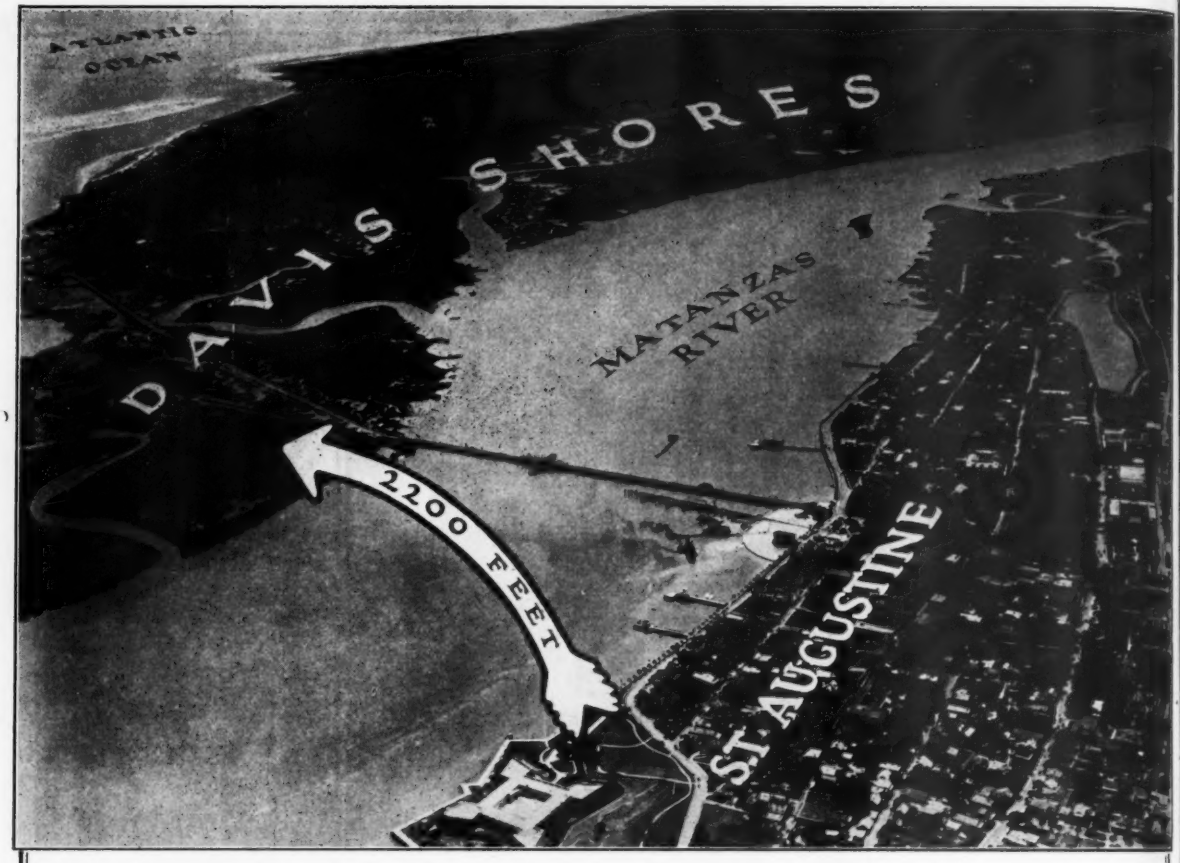
23 inches.

Displacement Light

3050 pounds.

Forward Cockpit—With Exclusive Schillo Feature.

SCHILLO MOTOR BOAT MFG. CO.



Introducing **Davis Shores**
—another DAVIS ISLANDS
St. Augustine on the Ocean

The new fifty million dollar development in the heart of America's oldest city, sponsored by D. P. Davis, developer of Davis Islands, Tampa in the Bay, Davis Shores will be another Davis Islands, for the things that were done there will also be done here.

Mr. Davis *made* Davis Islands and sold it out in a year's time. He spent millions in its development, and when the entire property was sold out he evidenced his continued faith in Florida and Davis Island by establishing a ten million dollar fund with which property-owners might build homes, hotels, apartments and business buildings. Davis Shores in Saint Augustine will be the same high-class and successful development as Davis Islands.

D. P. DAVIS PROPERTIES, *Owners and Developers*
ST. AUGUSTINE, FLORIDA

Advertising Index will be found on page 384

CHAP *Says:*

Play Fair!

ON Friday night, September twenty-fifth, the steamer City of Rome of the Ocean Steamship Company collided with Submarine S-51 off Block Island. Thirty odd men were on board the submarine. Three were rescued.

The Captain of the City of Rome is reported to have claimed that the submarine was running without lights; that she was manned by inexperienced men; that the submarine suddenly and without indication crossed the steamship's bow; that collision was inevitable.

A Naval Board of Inquiry, after thorough investigation, contended that the City of Rome was a blind ship when it rammed the submarine; that proper watch was not maintained; that the City of Rome failed to observe any of the rules of the road governing crossing or overtaking vessels. The Judge Advocate, we understand, asked the court to find the collision "due to gross negligence and incompetence on the part of the officers and crew of the City of Rome."

There you have both sides! And it is not our job to attempt to place the blame.

But every yachtsman who cruises Long Island and Block Island Sounds knows full well that steamships pay little attention to the rules of the road in their navigation when small motor craft are in their danger zone. They generally set their courses and stick, come what may!

Of course, we do not ask, nor expect, a Sound steamer to zig-zag all over the Sound just because a few little twenty-foot fishing boats blow puny whistles.

But we do feel that in cases of emergency it is the duty of steamers to obey the rules of the road; to acknowledge the signal given by a small boat and to obey it.

But they don't!

Fair play is fair play. Let the yachtsman understand the rules of the road thoroughly and well. Let him give the steamers right of way whenever and wherever possible.

But in an emergency the steam pilots should play just as fair. Let them observe the rules of the road as well as the other fellow.

Iron *Ships*

No, son, things are different now and there's no use talkin' otherwise

Each generation, as it approaches middle age, speaks of the good old days. Our grandfathers did, we do and our children will. It is a trait of human nature. And a foolish one. It is a sign of approaching old age. The good old days of the sailor were the clipper ship days when men were real men, and the Horn was Cape Stiff. In those good old days we had wooden ships and iron men. Have times changed? Have we now iron ships and wooden men? Is the courage, the bravery, the valor of the good old days gone? Are our sea-faring men of to-day sissies and mollycoddles? Read this article by Alexander Mead. And then let us drop for evermore that foolish expression iron ships and wooden men. Let us say, rather, what is truth—iron ships and iron men.

Chap-

and Iron Men

By Alexander Mead

HE is an old sailor, an old sea captain of clipper ship days. He is perhaps seventy-five years old; perhaps eighty. I didn't ask. He lives in a little cottage down on the Bay; lives there with mother, as he calls her sometimes, but more often it is just ma. You'll find him there now, sitting in the dining room window in an old-fashioned goose-neck rocker, smoking a little, short blackened briar and looking out to the sea. He's always like that; looking out to the sea and dreaming of days that are gone.

I clanged the old ship's bell and ma opened the door for me. At first she did not recognize me; then in a minute she bade me welcome and told me that the Captain was a'sittin' in the dining room. I pulled up his old sea chest, battered and marred, and used it for a chair. And I lighted my pipe.

We talked of men and of the sea and of ships.

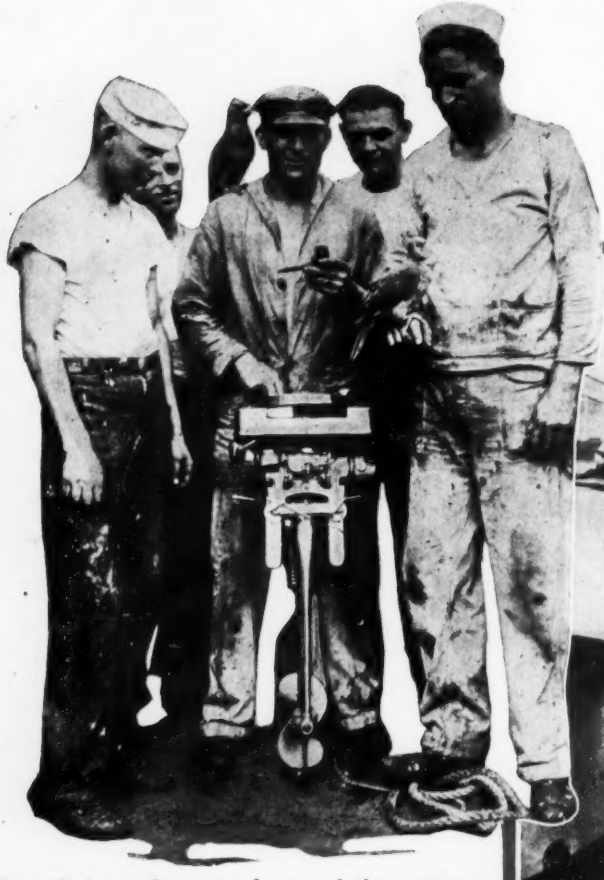
"No, son, things are different now and there's no use talkin' otherwise. Men are different now—that is, I mean our sea-farin' men. In the old days a man had to be a real man to stand the gaff; a real man that could live on salt horse and sleep on hard boards or perhaps if he was real lucky, a bundle of straw. And the for'castle in those days, son, wern't just what you'd call ladies' quarters, either. I remember once as how just up over my bunk I saw a black spot as big as your fist there. And it seemed to be movin'. I'll just give you two guesses, son, as to what that black spot was! But those quarters wern't much worse than the men that lived in 'em. In those days the crews were shanghied—and the crimps got the dirtiest scum of the waterfront. They'd come aboard dead drunk. They'd be dumped down into the for'castle just like so many bags. And yet livin' like that, those men had to do the hardest kind of work, I'll tell you. In those days competition was keen, time meant everythin', and we used to race around the Horn, old Cape Stiff, as we called it, like good fellows. And I'm here to tell you, son, that we never took off any canvas until the last second—and then, just in the nick of time, all hands would be called aloft. And many the time I've seen the yard arms covered with ice—ice and a cold, bitin' wind blowin' a gale. Then you had to watch your step! One mis-step, slip, and you were a goner—and I'll tell you many a good man has gone that way. Everything in those days was discipline—and discipline kept with hard knocks and hard blows. The best mate then was the old bucko mate who knew how to handle his fists—and didn't hesitate to. An' for all that what did a man get? Eight dollars a month—and it was a lucky man who didn't lose two months' wages to the slop chest. Yes, sir-ee, son, those were days when men had to be real men—but things are different now. I wouldn't say that our men to-day are a lot of sissies, but they're pretty close to it. Iron ships now, yes sir, but wooden men—that's it! Now they get real mad if they don't get ham and eggs for breakfast and have nice soft mattresses to sleep on. And do they drive around Cape Stiff? No sir-ee! They rest

(*Continued on page* 348)

OUTBOARDS *On Submarines*

An Observer with the Fleet on the Pacific Cruise Sees Many Interesting Things from the Motor Boat Man's Viewpoint

By **L. R. Freeman**



Part of the engine room force and the mascots inspect the new Elto

PERHAPS the most significant thing from the motor boatman's viewpoint, observed in the course of the Navy's cruise to the Pacific, was the increasing interest in the portable outboard engine. All the heavier service craft carried by every type of warship from destroyer to battleship are powered with inboard motors. Besides these, however, every ship carries two or more light boats of the whale boat or dinghy type, which are propelled only by oars. These are used for racing and for landings in water too shallow for the larger boats; also for fishing and various sorts of shore jaunts when the fleet is in such out-of-the way places as Guantanamo Bay.

With the increasing power and reliability of outboard motors, it has occurred to a good many of the men and officers that such a type of engine could be used with the whalers and dinghys without in the least interfering with their use for racing. While no official action has yet been taken by the Navy Department looking to the providing of outboards, some of the ships, acting on their own initiative, have purchased them with moneys of their own—usually that from their sports funds.

The results of a most successful purchase of this kind was observed at Panama, where each of four submarines at Coco Solo, Panama, had bought an Elto engine for use with its wherry, the only boat possible to carry in that type of craft. The illustrations show some of the men at the submarine base trying out their purchases.

While the outboards are not Navy equipment, their convenience has prompted many crews to buy them from their own funds

Courtesy International Studio

Path of Gold

by Jonas Lee

Was it but lure of yellow ore that drew across the main
Adventurers from Devonshire, discoverers from Spain?

Was it not rather gorgeous suns in twilight-gilded skies
That led them through mysterious seas with worship in their eyes?

Was it not rather that they sought beyond tame harbor bars
A lovely deep uncrossed except by caravans of stars?

Did not Magellan, did not Drake pass on to men of now
The urge to follow Beauty's call beyond the plunging bow?

And who deems now an Aztec hoard his treasure or his spur—
With gold of dawn and dipping sun to lure a voyager?

by Daniel Henderson.

To You, Mr. Motorist!

By C. F. Chapman

TO you who are tired of crowded highways, of long parades of cars; to you who are weary of touring, with crowded hotels and crowded garages and hot dusty highways, to you, I say, come join the sport of kings! You'll enjoy cruising over blue water as you have never enjoyed a sport before. For a boat is more than something that just takes you somewhere, it is a home to you, a home afloat! A home anchored this week in a little cove, the stillness of which reminds you of a mountain lake where all is quiet, calm, peaceful; and next week anchored in a bay with ever so many neighbors, where you can hear strains of lilting music from a clubhouse on shore, where all around you is life and activity. Come a week-end, and with it the urge to go somewhere, just weigh anchor and go! No packing, no bother, no fuss! No dusty roads, nor long parades of cars, nor crowded hotels. Shall we explore this waterway or that little bay? We port helm! Shall we remain here an hour or a day? We let go anchor! No need for us to worry about rooms and rates; no baggage for us to unpack, for we are at home, always at home.

This year the Motor Boat Show, held in the Grand Central Palace, January 22 to 30, will be more interesting than ever; more interesting to the experienced motor boatman, and more interesting to you who may be considering your first boat. Visit this Show, Mr. Motorist! Examine this boat and that! Here is a cruiser sixty-two feet long. A great palatial summer home. Here is one forty-two feet, another thirty-four feet, another twenty-six feet; and each affords all the conveniences of the summer home. And if you want to talk it over, if you want suggestions or help or advice; visit MoToR BoatinG's Booth. We will be glad to help you in any way we can; glad to introduce you to the greatest sport of all; to start you on a course where you'll find great joy and great happiness, the joy and happiness that comes with cruising over blue water!

SHANGHAI'S *Last Voyage*

A Condensed Account of the Adventurous Journey Across the Atlantic Following the Viking Route

By **F. DeWitt Wells**

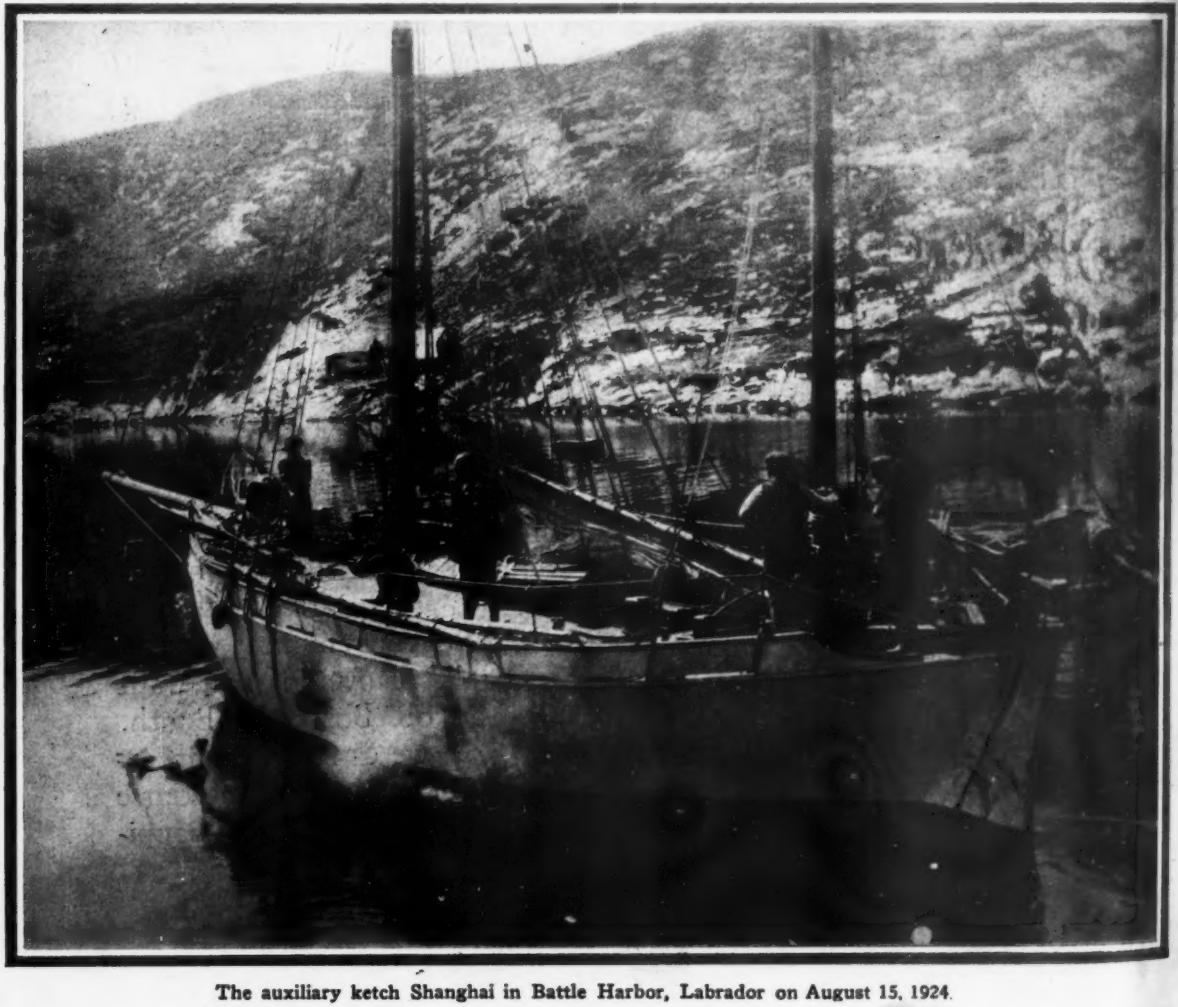
WHEN my son and I planned to cross the Atlantic by the Viking Road last summer, we were as much interested in getting a boat with a capable engine as one whose sails were in good condition.

We knew little about sailing craft but we had experience in motor boats. We had cruised in a thirty foot boat from New York to Mount Desert and had negotiated through a ten days' fog every lighthouse and bell-buoy from York Harbor to New London. We had poked through canals, across bays and lain many a night close to siren whistles. We had been around Long Island and down as far as Annapolis. We had run on a sunken pile, been almost swamped, once had lost our propeller and often lost our way but we had never been shipwrecked.

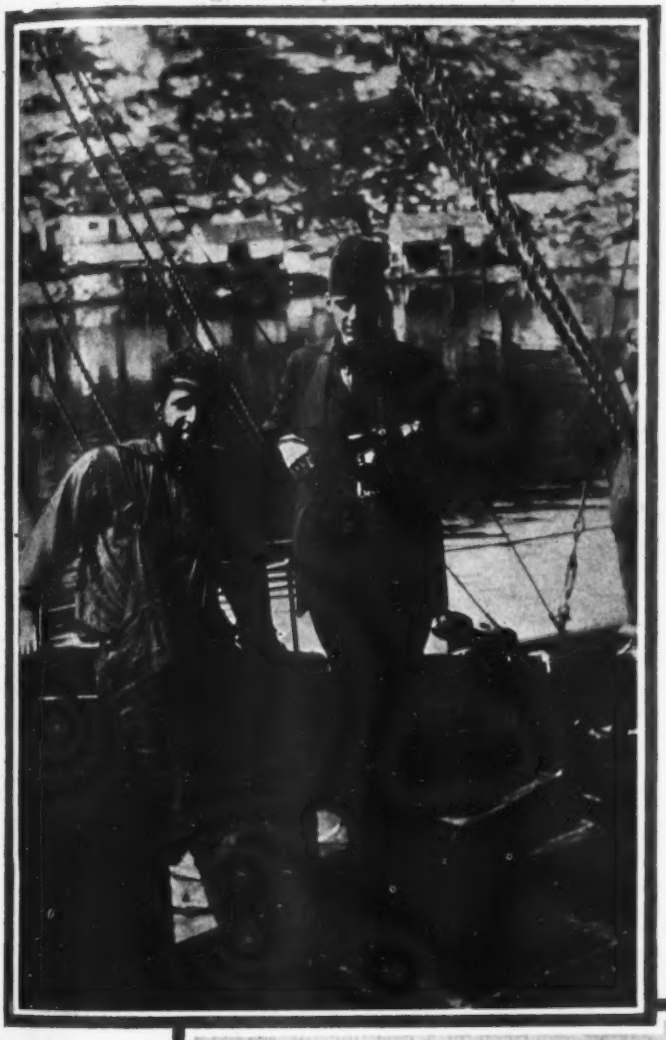
We were landlubbers, duffers and landsmen—and probably fools. What we had read about the cruise of the Shanghai inflamed our imagination. She was a seaworthy boat and above all she had an engine. To us, the important part was that there was an engine. There was something definite about that and in all our talks, discussions and plans we would always return to the fact. The glow and wonder of the adventure would warm us into an almost too excited pitch but it seemed as though the figures of how much fuel the boat could crary, where we could get a new supply and how far we could go on the available supply made the trip definite and at least a possibility. We had heard of the Ketch Shanghai and the voyage from China.

The three young Danes, Vanman, Inguerson and Haugland who had sailed Shanghai across the Indian Ocean, around the Cape of Good Hope, up the west coast of Africa and to the Canary Islands had used fuel as well as sail at intervals all the way. When they came to Las Palmas their funds gave out and there was no more cash to buy oil or kerosene. It had been a serious decision when they determined to set sail for Denmark with empty tanks as well as empty purses.

It was 1,200 miles from Las Palmas in the Canaries to Copenhagen, but they had favoring winds and made a good run until they met a gale off the Lizard where they lay for three days, losing their sea anchor and part of



The auxiliary ketch Shanghai in Battle Harbor, Labrador on August 15, 1924.

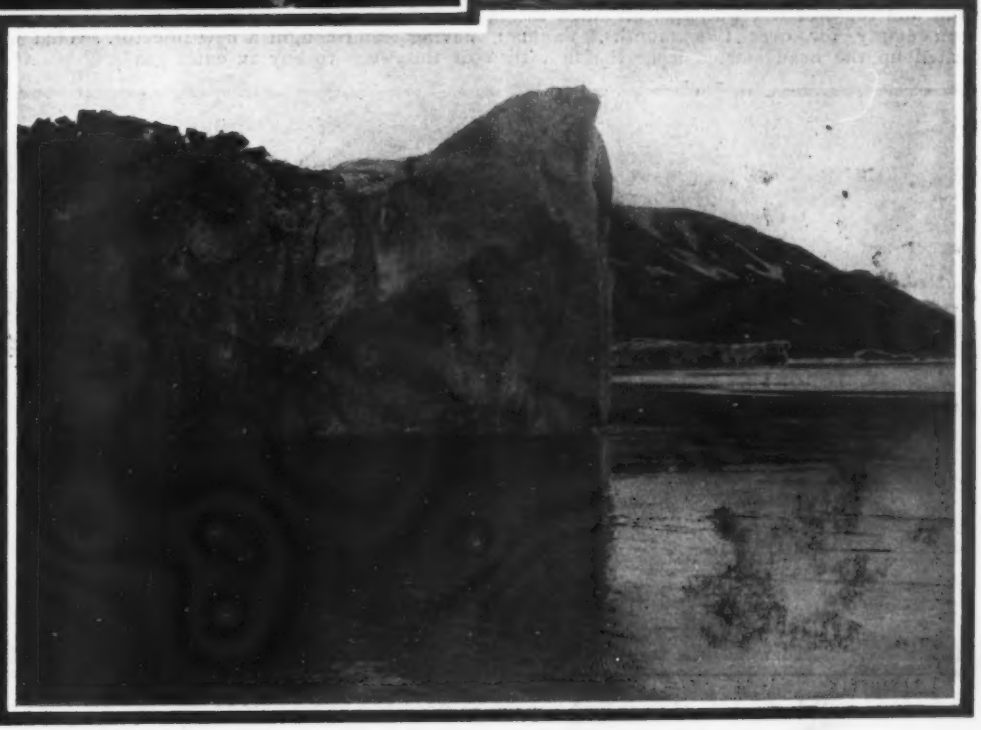


Jay Wells and Chanler Chapman on the deck of Shanghai at Battle Harbor, Labrador, after running out of razor blades

their chain. Then sailing through the English Channel in a fog so that they never saw the French or English coast and were only able to identify the lights. It did not matter, as they told us afterwards, for they could not have entered a harbor for they had absolutely not a sou with which to pay harbor dues and clearance charges. Entering and leaving a harbor in continental countries is a serious and costly matter, as I was to find out later. They kept straight on, were almost driven on the Skagon, the dangerous northern hook of Jutland and reached Copenhagen about the first of May.

When I left America I did not know whether they had yet arrived. I reached Copenhagen early in June and through the secretary of the Royal Danish Yacht Club was put in touch of the owners and in a few days had bought the Shanghai.

It was a question now of outfitting—buying provisions, charts, and getting together a crew. I was keen to have either Vanman, Inguerson or Haugland go with me. They were the proper ones; they had sailed the sixteen thousand miles from China and they knew every inch of the boat, having built her in China and done a part of the actual work themselves. They were familiar with all her habits, behaviors, advantages and disadvantages. I dined them and wined them and entertained them; fed them on excellent Danish sandwiches and gave them schnapps. I took them to the theatre. But, as they had been fourteen months on their voyage and had grown tired of the sea I could not persuade them to start on another rough trip. Furthermore, I had just paid them for the Shanghai and they were flush with money. I had paid them exactly what they asked for the boat and it is a comfort now that Shanghai is gone, not to have the unpleasant memory of having negotiated as to price. At one time I thought their unwillingness to go was due to a hidden defect in the boat but it was not so. They were fine, straightforward



At Narsak, in Greenland, we anchored between a large rock and an iceberg

Shanghai and Lief Ericsson were in Reykjavik Harbor, Iceland, at the same time. This picture of Nutting on Lief Ericsson was taken there in the early part of August, 1924.

young Danes for whom I still hold the greatest admiration and regard.

I engaged Vanman to overhaul the engine. It was a Grei Norwegian, single cylinder hot bulb, heavy duty, ten horse-power motor burning kerosene or crude oil. The 28 inch propeller was reversible. He said it was in good condition and did not need to be taken down. This did not seem reasonable considering the long voyage from China. The engine had been sent over from Norway to China and installed there. Vanman said they had spent so little money for fuel and been so sparing in its use that it was almost new. It looked all right and the best test was, that although the tanks had been empty for over two months, Vanman, having heated up the head started it at the first turn of the fly-wheel. It might not have been a wise test in a more sophisticated community but there was no mistrust of Vanman and my confidence was right. The engine proved to be a responsible friend through our trip except on the last leg of our journey. We named it after Vanman and neither he nor the engine deceived us.

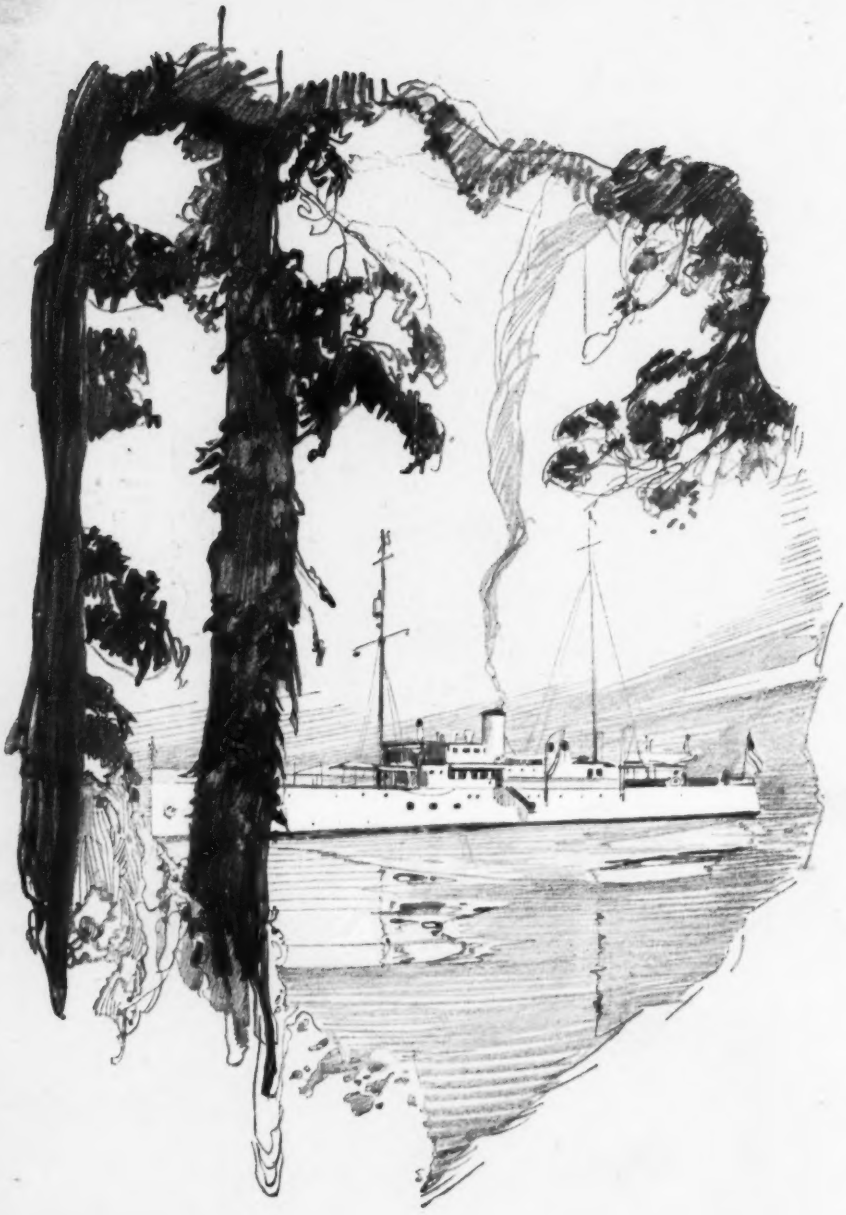
I finally persuaded Vanman to go with me as far as Bergen where my son was to meet me, coming by steamer from New York. It seemed a fair proof that if Vanman were willing to go with the engine five hundred miles he had confidence in its good condition. However, he did take it down, overhauled it, put in new gaskets, supplied a few springs, renewed the fuel pipe and bought a new injector. What we should have done was to buy an extra gas *(Continued on page 34)*

The hills of Greenland would accommodate a switch back railroad without much work

In Sunny Florida

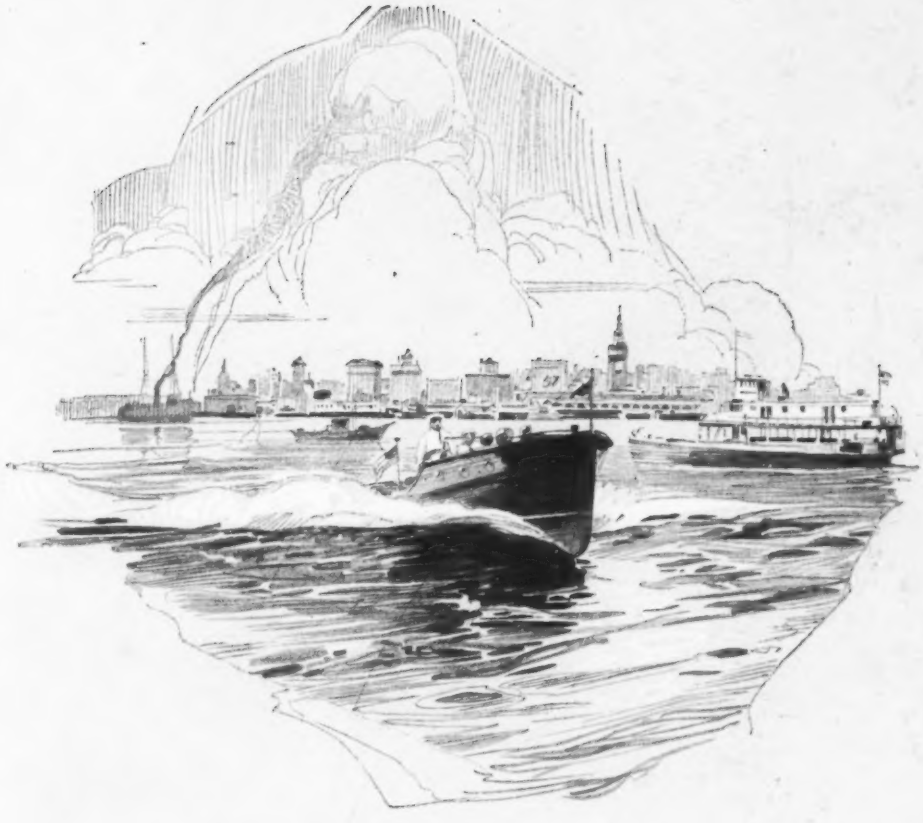
The Mecca of All Able Boats
During the Winter Where One
May Soak Up the Sunshine and
Take His Ease Under the Palms

Drawings by G. C. Pearce.



Back in Larchmont Harbor

A Round the World Cruiser Arrives Safely Back in Familiar Waters, Bringing Gifts and Treasures for Fortunate Friends

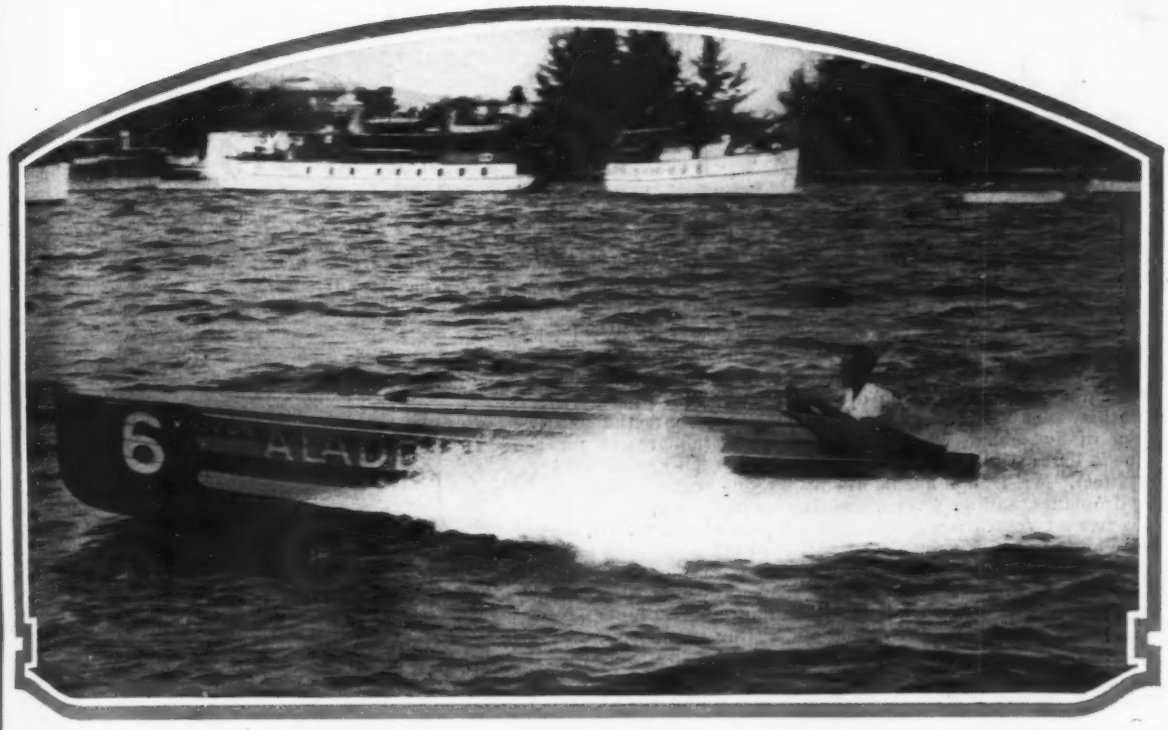


In the PACIFIC

San Francisco Takes Its Boating Seriously Since the Waters Beyond the Golden Gate Are Not Always Still

The Detroit Yacht Club

One of the Largest Industrial Centers in the United States Finds Pleasure and Recreation in Its Boats and Yacht Club



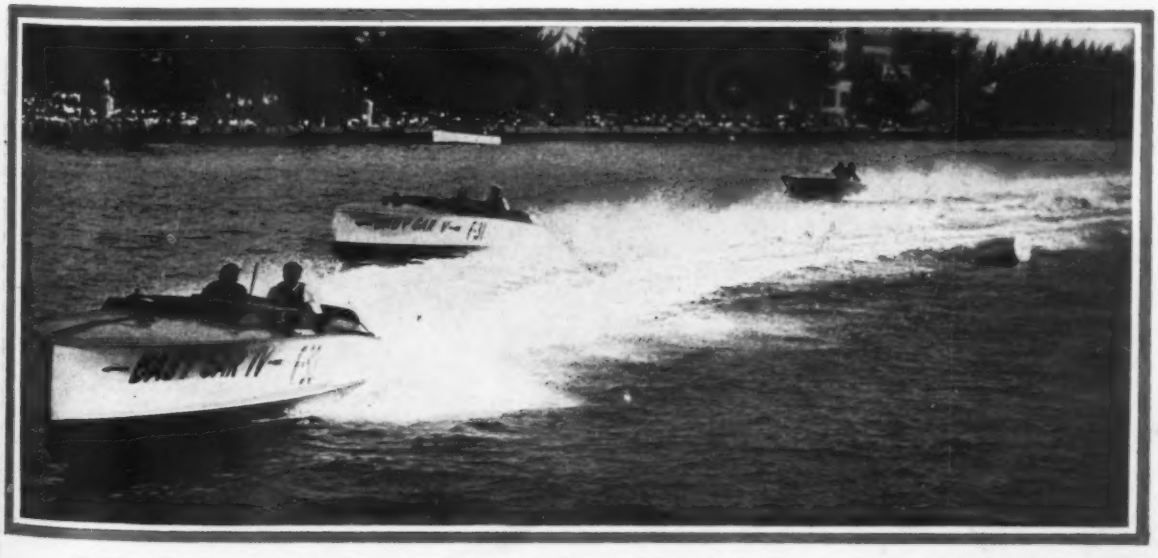
Aladdin, the Biscayne Baby owned by Otto Sovereign of B ay City, Mich., which will race at Miami Beach

Florida Racing Season Opens This Month

National Regattas at Palm Beach, Tampa, Miami Beach and St. Augustine with Champion Craft from East and West to Compete

MIAMI has formed a real yachting organization and a site has been presented to them on the Venetian Islands in Biscayne Bay between Miami and Miami Beach, which when the present plans are developed will result in the most elaborate yachting center in the South, something which has been sadly needed but lacking in the land of perpetual sunshine.

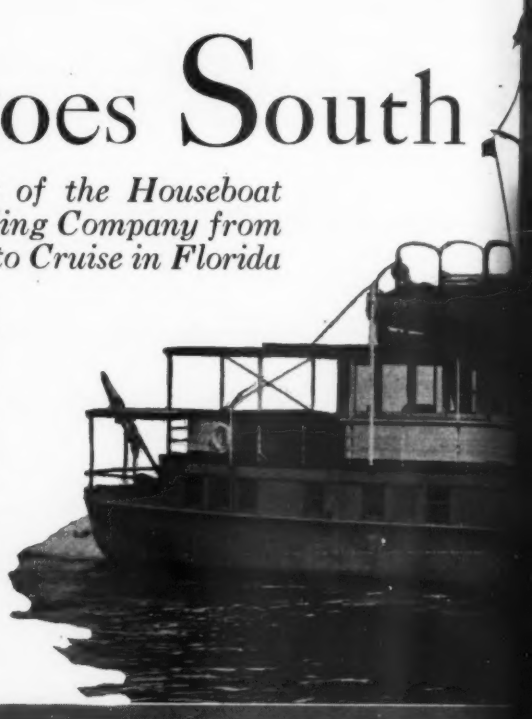
A short time ago the owners of the Biscayne Baby class of one design boats which produced such spectacular racing at the Miami Beach and Manhasset Bay Regattas last year, met at Miami and formed the Miami Yacht Racing Association. (*Continued on page* 100)



Racing for the Fisher-Allison Trophy at Miami Beach will be one of the features of the winter's activities

SAMURI Goes South

Unusually Elaborate Cruising Craft of the Houseboat Type Built by the Mathis Yacht Building Company from Tams and King Designs, on the Way to Cruise in Florida



YACHTSMEN will be pleased to know that W. Earl Dodge has revived his interest in boating, and has taken over his new houseboat Samuri, designed and built under the supervision of Tams & King for him, by the Mathis Yacht Building Co. The boat represents the finest type of houseboat, which is so popular at the present time. She is 100 feet in length, and the draft has been kept down to 3½ feet. Mr. Dodge has had many famous boats from racing hydroplanes, sailing sloops, and fast motor yachts. Samuri, his newest vessel, is without a doubt one of the most elaborate and attractively furnished yachts in the country.

Her arrangement follows the usual, with the staterooms and living quarters below the deck, while the deck house above looks after the dining and sitting rooms, as well as the operating quarters of the vessel. The dining room is a wonderfully attractive place, with English lacquered

The attractive dining room with its English lacquered furniture and fine drapes

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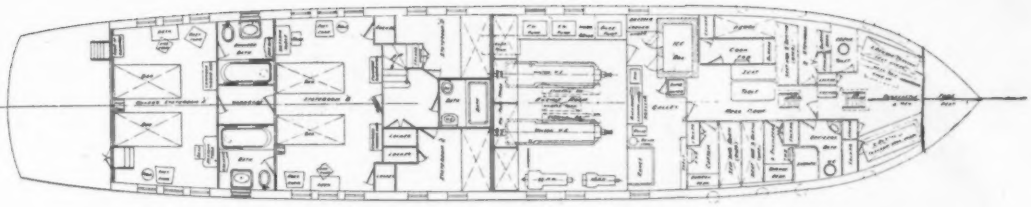
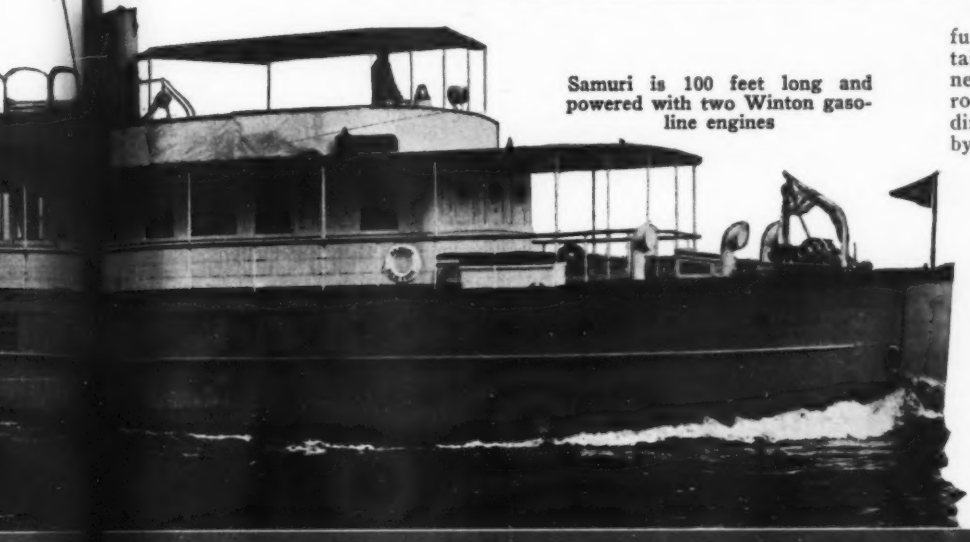




Samuri is 100 feet long and powered with two Winton gasoline engines

furniture, combined with curtains and coverings in a Chinese pattern. A large sitting room is directly aft of the dining room, divided from it by curtains, which make two separate rooms. Window curtains and furniture coverings are of the same type material.

The motive power will be two Winton gasoline engines, with two auxiliary generating sets of the same make.

A large sitting room is attractively furnished and supplied with an abundance of lamps, desks, and bookcases

The new six cylinder, 94 h. p. engine, built by Elco, especially for their big boats

Elco Show

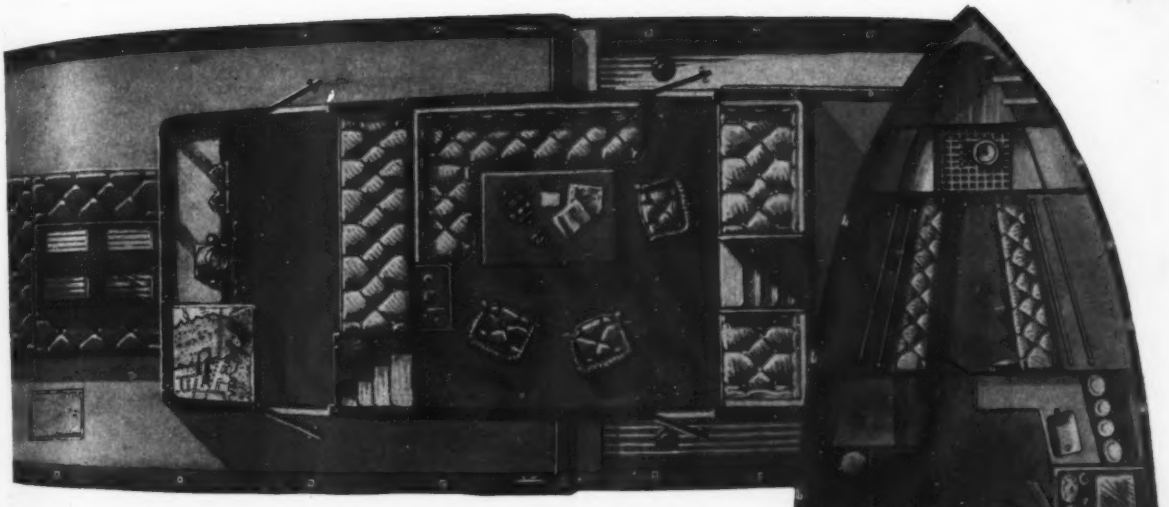
New Sixty-two Foot Elco Motor Yacht Is t... by Any Boat Builder, and Also the Larg...

WHEN dealing in superlatives, there is always the question a... to whether the term larger or largest really means what i... conveys. When we say that the new 62 foot cruiser jus... completed by the Elco Works of Bayonne, is the largest standard... ized boat ever attempted, and ever exhibited at any Motor Boat Show... we are quite safe from contradiction. During the fall and winter, the... Elco Navy of standardized craft has grown appreciably by the addi... tion of several new members to the family. These are, a new 42 foot... cruiser, a new 50 foot cruiser, and a new 62 foot cruiser.

Of these, the 62 foot craft is easily the supreme feature of thi... year's show. It is the largest and finest craft ever exhibited, and is a... development and improvement on the well known Elco 56 foot... cruiser. It is, as is natural, much more commodious and contains... many features which were not practical in the smaller boats. The... deck house is divided, with a greater portion used as an airy... deck saloon. Communication from this point to both fore and... aft cabins is an attractive fea... ture. The pilot house occupies... the forward compartment, and... may be used as a captain's room... or an extra guest room. After... quarters include two double and... a single stateroom, together... with an exceptionally large... and handsomely appointed... bathroom. The plan of the... boat will show the attrac... tive arrangement, and...

Interior picture plan of the new 50 foot standardized cruiser, shown for the first time

Outboard profile of the 50 footer, showing the relation of enclosed deck house to the hull



A portion of the deck plan of the 62 footer showing the enclosed pilot and deck house structures

Largest Boat

Largest Standardized Boat Ever Attempted
Craft Ever Brought into a Motor Boat Show

the way in which the utmost value has been obtained from the space.

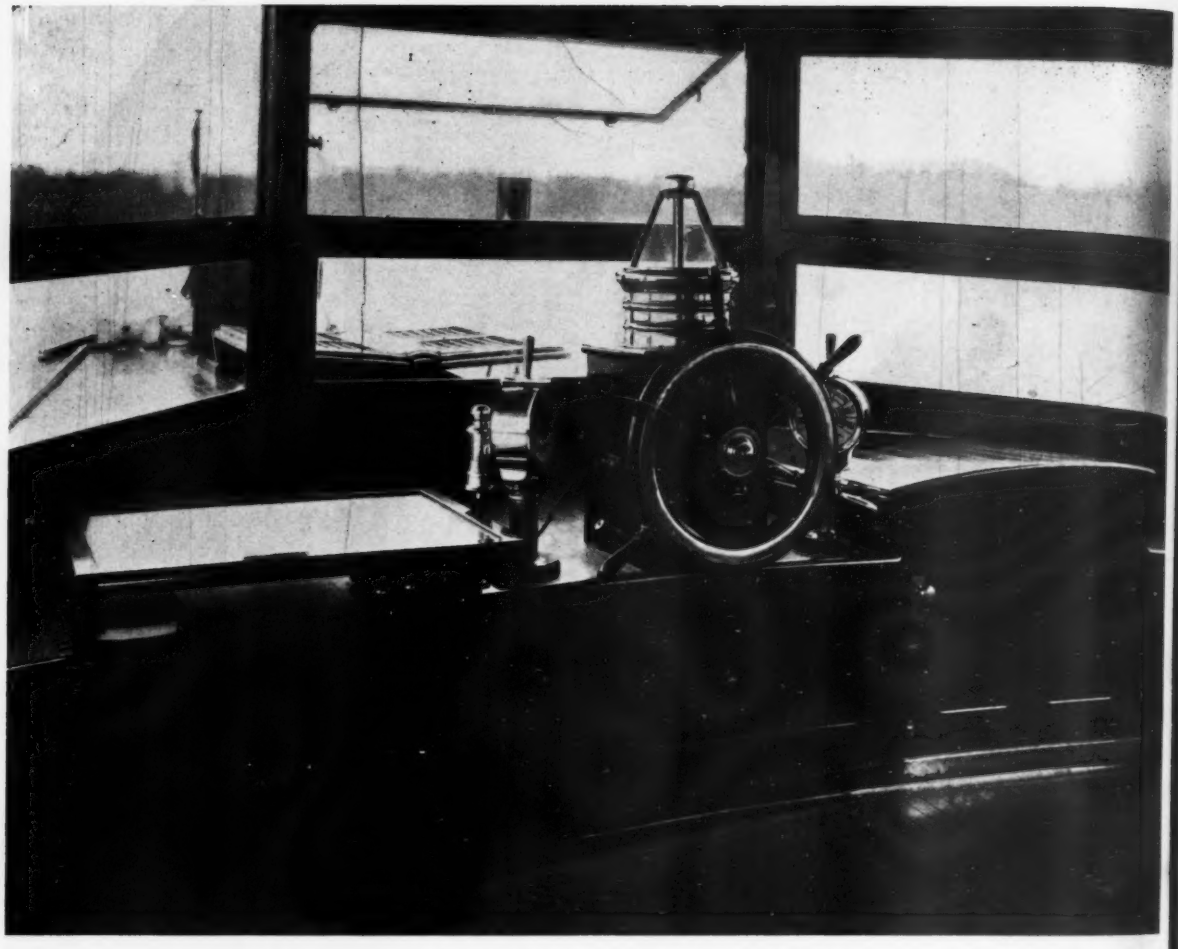
As power plant for this boat, two of the new six cylinder Elco engines will be used. These develop 94 h. p. each, and represent a decided advance in engine design. They are capable of driving the boat at 14 m. p. h. quite easily. This boat is a great advance over the earlier 56 foot cruiser, both in accommodation and in mechanical features.

The 50 footer is also a development and enlargment of the earlier 45 foot cruiser. It has all the time proven excellence of the earlier boat, and in addition many new features. The owner's quarters remain substantially the same, together with a large main saloon forward, and a fine stateroom aft. The galley on this boat has been placed in the bow, which arrangement has proven quite satisfactory. Enclosed on three sides, the bridge space is now much larger, while the after-deck space has also been increased in size. Improvements have been made in the crew's quarters, in combining them with the engine room. Complete living accommodations have been provided for two, including toilet facilities, and berths, while full head room has been obtained also. A single engine of the new Elco, six cylinder type drives this boat at 14 m. p. h. also.

Intermediate between the 50 footer and the well known cruisette, is a new 42 foot cruiser, which comprises all of the accommodation previously obtained in the 45 foot boat.

Arrangement plan of the big 62 footer showing the staterooms, as well as other portions of the craft

Outboard profile of the new 62 foot Elco cruiser



A neat bridge arrangement showing binnacle properly placed so that the compass card can be readily seen from the helmsman's position, engine room telegraphs and chart case

THERE'S NOTHING TO IT

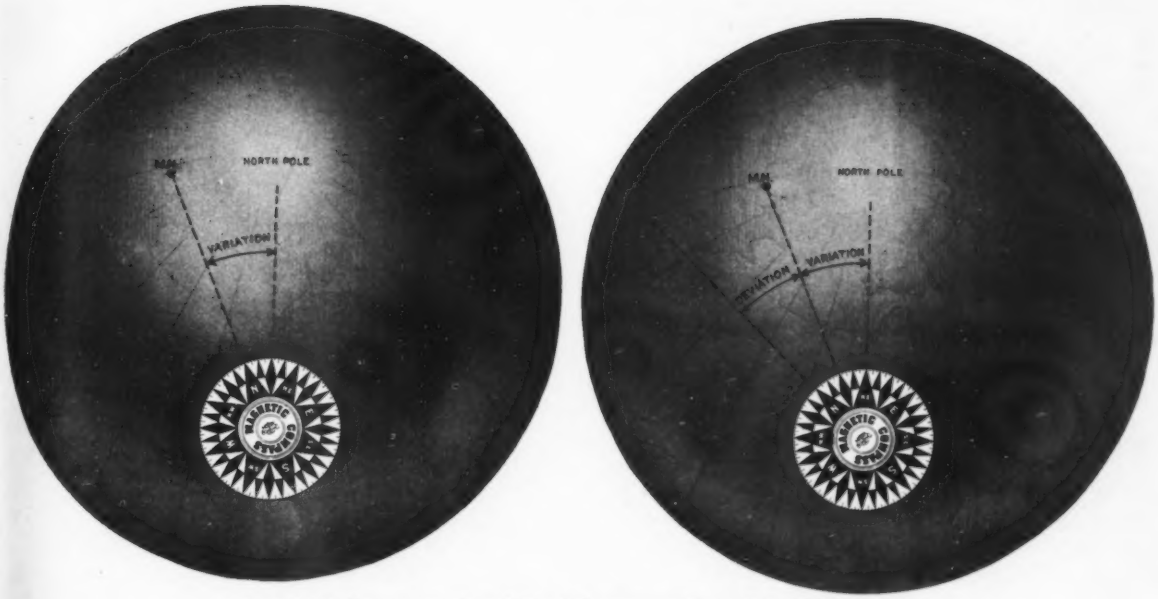
By Frank Stevens

Part IV—*The Compass and Compass Errors*

WE come now to a discussion of the compass. And this is the most important instrument on board ship. Upon it often rests the safety of the vessel. In a fog, and sometimes a fog will develop with startling rapidity, the boat must be steered by compass. And then it is a mighty comfortable feeling for the motor boatman to know that first, he understands his compass, and secondly, that he can depend upon it.

When you outfit your boat get a *good* compass. Don't be content with some flimsy little affair that you buy at a bargain. Go to a reliable compass manufacturer, tell him the size of your boat, and tell him that you want a real compass. Beware of navy out-let stores; beware of regular navy type compasses, offered at a bargain—there is oftentimes a joker in that little word type. Beware of the friend who offers to sell you a perfectly good compass that he has no further use for. Think of the story of the little boy who, holding a dead cat by the tail, cried out to his mother, "Look, mother! I found a perfectly good cat in the ash barrel!"

Your friend may tell you that if you do not find the instrument he offers perfectly satisfactory in every way, he will refund the money. That is what the merchant, anxious to make a sale, told the customer who was buying a bullet-proof vest—if it was found not to be bullet-proof the dealer would refund the money. Small comfort in that thought for the buyer; and small comfort for you in your friend's generous offer when you find yourself piled up on some rocks! To repeat—and I'll probably repeat it many times—buy a *good* compass and depend upon it!



At the left is shown a westerly variation of the compass of two points and at the right a westerly variation of two points in addition to a western deviation of two points. Note the position of the North point of the compass in each of these two instances

Moreover, understand your compass. Understand it thoroughly and well. Study it! And do this intelligently, so you will *understand* it. Just because you can rattle off the compass points—North, North by East, North-northeast, Northeast by North, etc., etc., does not necessarily mean that you *understand* what you are saying; indeed, it means nothing at all! A parrot could be taught that!

You are probably familiar in a general way with the ordinary garden variety of compass; the little instrument you might use in the country or in the woods. The boat compass, however, is different in two respects; first, it is a liquid compass rather than a dry compass, and secondly, a compass card is used rather than a needle or pointer. Description of the boat compass will be confined to explaining these differences.

The compass used in the woods has a fixed card with the compass points, North, South, etc., etc., printed on it and a revolving pointer (magnetic needle) mounted on a pivot.

When this compass is used it is necessary to hold it very still, or to place it on some stationary object until the needle settles. If you were to walk with such a compass in your hand, the needle would shift its position so violently due to the motion of the body, that it would be almost impossible to determine any compass direction.

Such a device would be impractical on board a boat because the motion of the boat, vibration set up by the engine, etc., etc., would agitate the needle just as would the motion of the body. And the boatman must always know the exact compass direction if he is to keep his course.

This susceptibility to vibration and motion is reduced by the use of the liquid compass. Here the body of the compass is filled with a liquid, usually a mixture of alcohol and water. The needle is attached to a card so that both turn together on the pivot. Part of the weight of card and needle is taken off the pivot by means of an air chamber in the middle of the card, although this is not usually used on small compasses. The compass bowl is fitted into a gimbal ring, a contrivance which permits the bowl to tip freely in all directions so that the compass is at all times level. And the whole is mounted into a box so arranged that the compass card can be easily observed through a small window.

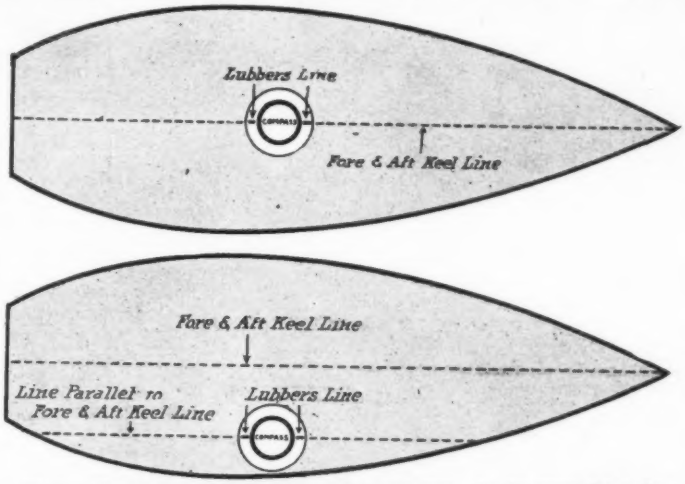


Diagram showing a correct installation of the compass. In the upper figure the compass is placed directly over the keel line of the boat so that a line drawn from the bow to the stern passes through both lubber lines and the center of the compass. In the lower figure, the compass is placed off the keel line but in such a manner that a line drawn parallel to the keel line also passes through both lubber lines

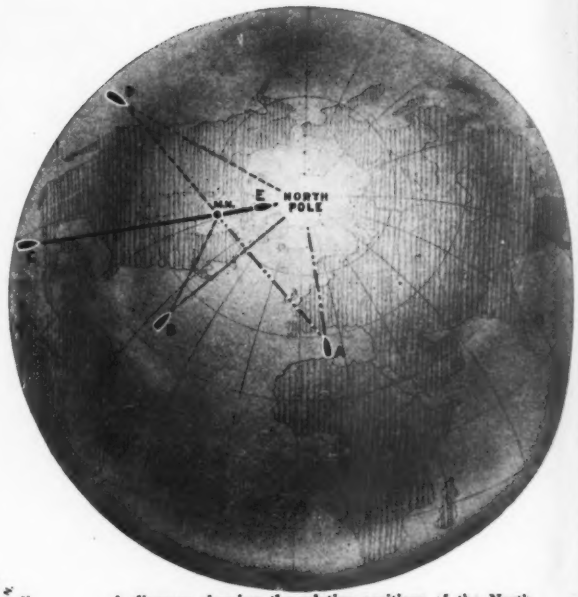
But, you say, if the air vessel with the card mounted on it turns, how does the motor boatman know the exact direction so that he may keep his course as closely as possible?

The air vessel, or compass card, as we'll now term it, is mounted slightly below the rim of the bowl, the inside of which is painted white. The bowl is secured to the compass box so that it cannot turn. A vertical black line, accurately bisecting the bowl, is drawn on the inside from one point on the rim, to a point directly opposite. This line is called the lubber line and the compass should be placed on the boat so that this lubber line is exactly parallel with the boat keel. The end of the lubber line, at the rim, shows plainly above the compass card. As the bowl is fixed, this line is the reference line.

If the compass is mounted on the boat so that the lubber line is not parallel with the keel, an error will result that must be taken into consideration when calculating the course. This can be explained as follows: Hold the boat compass in your hands with the lubber line mark directly in front of you; the compass point opposite the lubber line is N—we'll say for example. Now if you wanted to walk one hundred feet in exactly a northerly direction, you would keep the N on the card just as close as possible to the lubber line.

But suppose you turned the compass (the whole box) ever so slightly to the left, but continued to walk straight ahead. The lubber line would now be opposite North by West—the first point to the left, while your actual direction would be north. Now if I were to join you, and did not know that you had turned the compass, and did not observe it, I would take your direction from the compass—North by West.

Applying this to the boat: The line of the keel of your boat and the line extending from your lubber line are parallel. Therefore, if the compass point N is directly opposite the lubber line, the boat is going in a northerly direction.



A diagram showing the relative positions of the North Geographic and Magnetic poles and how these affect the variation of the compass at different points on the earth's surface. At each of the points A, B, C, D and E the boats are heading true North, but only at point C is the compass on the boat showing North

The names of the thirty-two compass points and all of the quarter points. Note that twenty-four quarter points have two names, either of which is correct

definite direction and means something.

The circumference of the boat compass is divided into thirty-two equal divisions called points—and each has a name. North, South, East, West, are the cardinal points—and each differs from the adjacent one by eight points, or ninety degrees.

Midway between the cardinal points we have the inter-cardinal points: Northeast, Southeast, Southwest, Northwest.

Midway between each cardinal and inter-cardinal point is one the name of which is a combination of the cardinal and the inter-cardinal. Beginning at North and going to the right we find these in the following order: NNE, ENE, ESE, SSE, SSW, WSW, WNW, NNW.

One more division is made and then the compass is boxed; for example, the point between N and NNE bears the name N by E; the point between N and NNW bears

(*Continued on page* 358)

Of course, note can be made of such an error and correction made when working out a course; but why bother with it when the error can be eliminated by mounting the compass correctly?

As has been said, it means little or nothing to rattle off the points of the compass parrot-like; it means everything, however, to the amateur skipper to have an understanding of these. The difference lies here: by the parrot method S W by W is simply something that is rattled off quickly and means nothing; when the boatman understands his compass, S W by W is a

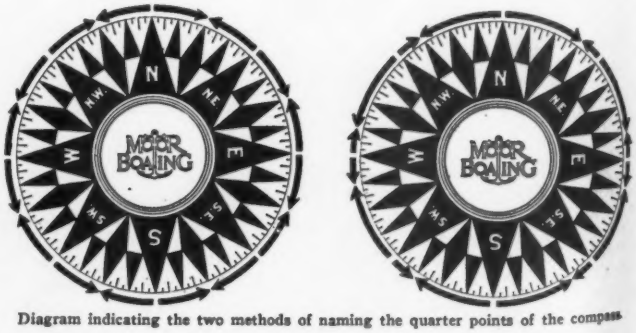
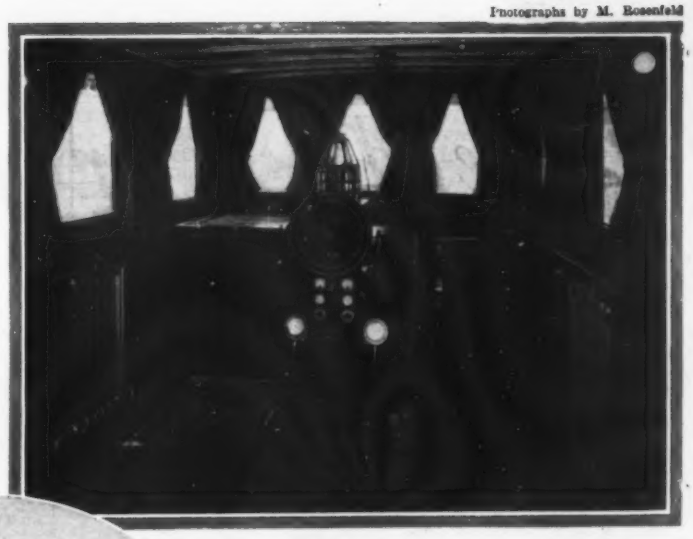
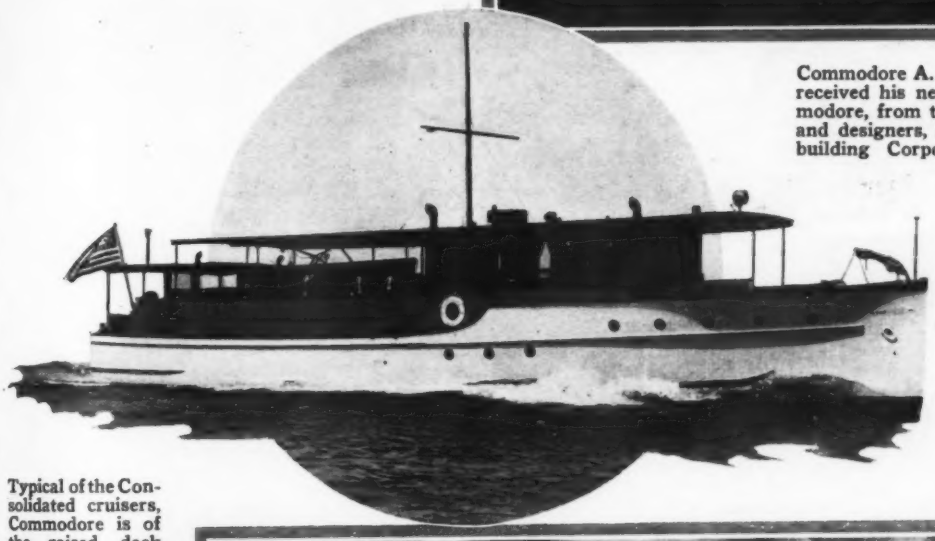


Diagram indicating the two methods of naming the quarter points of the compass

Detroit's Genial and Most Popular Yachtsman Christens His *New Yacht* COMMODORE

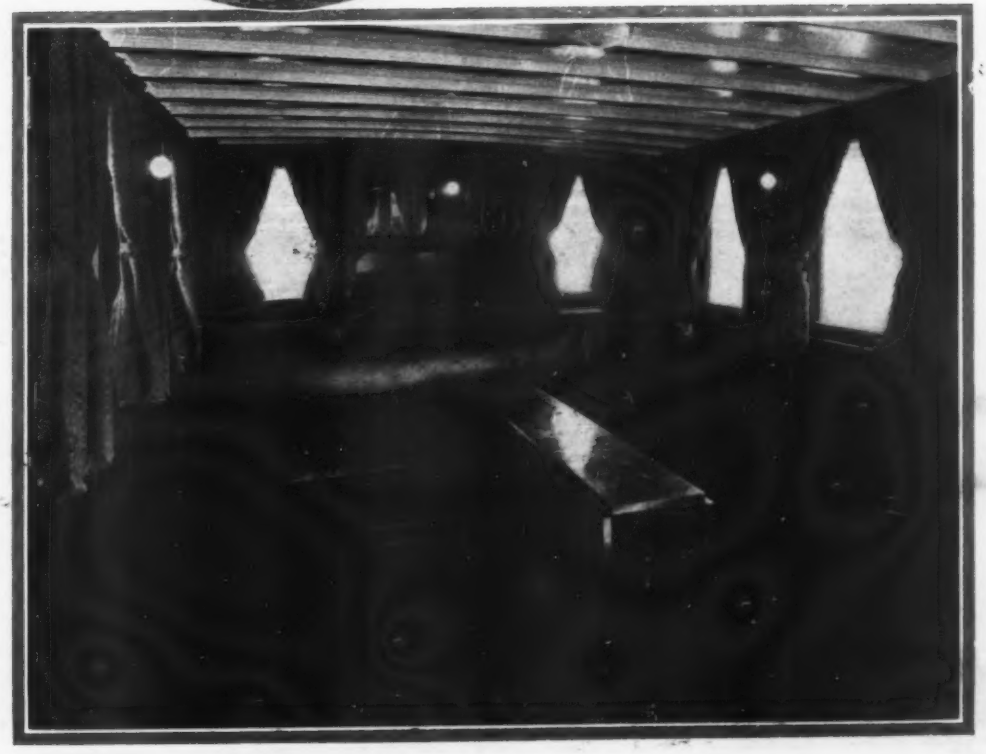
Photographs by M. Rosenfeld





Commodore A. A. Schantz has recently received his new 65-foot cruiser Commodore, from the yards of the builders and designers, The Consolidated Shipbuilding Corporation of New York. The new craft is a fine example of yacht construction and will be one of the show pieces of the Detroit Yacht Club fleet

Typical of the Consolidated cruisers, Commodore is of the raised deck type, with a large deck house. Two large staterooms are aft, with access to the open cockpit. All interiors have been carried out in mahogany, and furnishings fashioned by Consolidated decorators



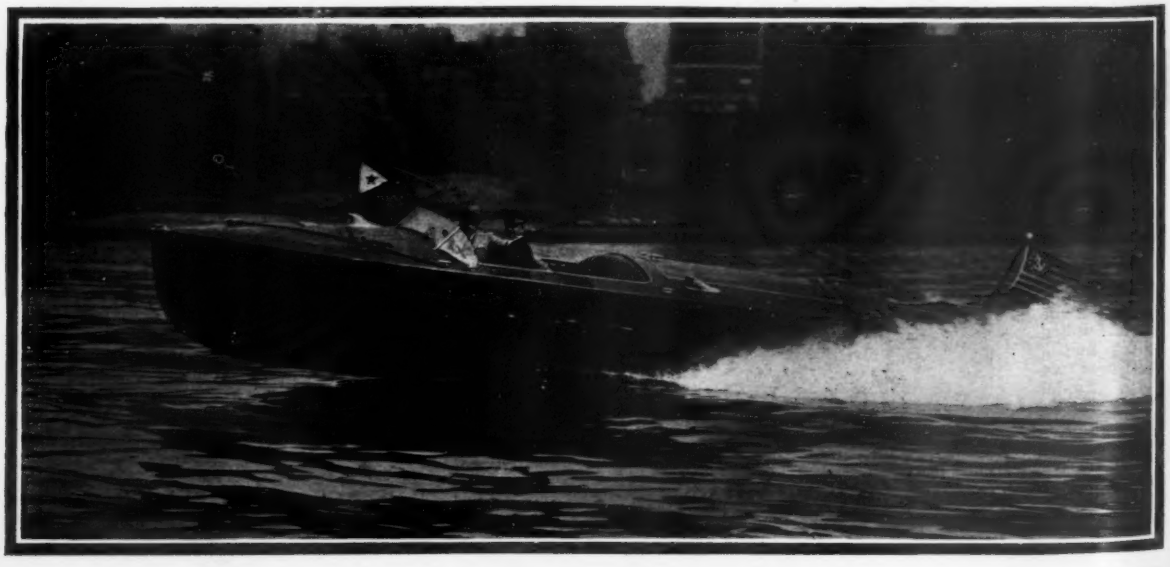
The power plant is in a large engine room under the deck house, and consists of two Speedway model MR 180 h.p. gasoline engines.. All auxiliary engines and the usual engine room fittings are also located here

Speedy Craft Whic

There Is Only One Way to Secure High Speed In a Boat and That Is to Select a Well Designed Hull and Put Sufficient Power Into It to Do the Work

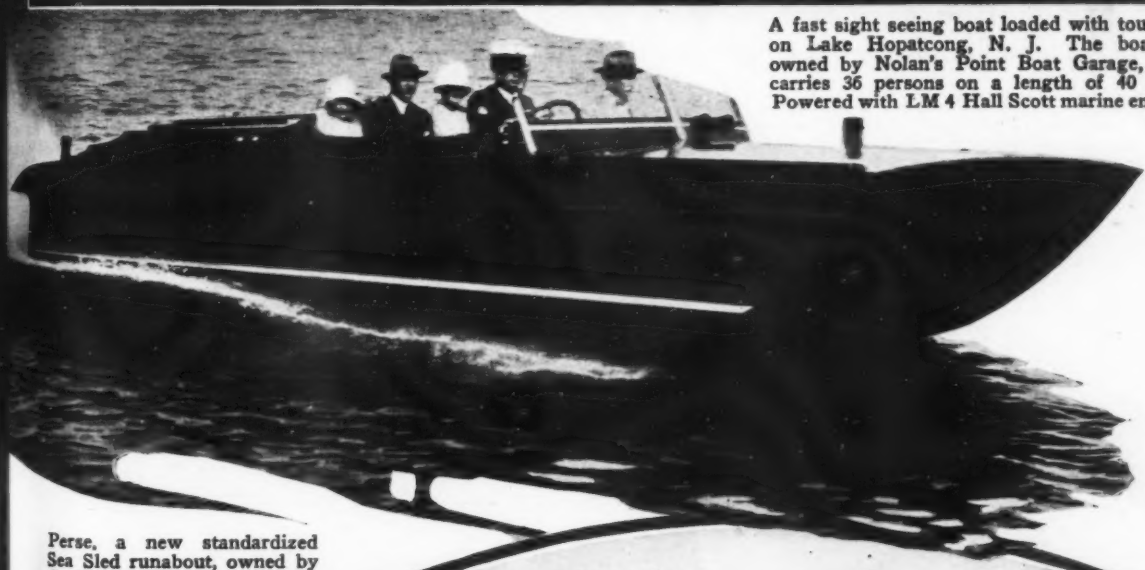
Lake Hopatcong in New Jersey furnishes an ideal summer boating center, sufficiently close to New York, to permit excellent sport. Sirod the Belle Isle Bear Cat, owned by C. D. Peck is used continuously on the lake and does 38 miles with the help of an LM 6 Hall Scott marine engine

This super Bear Cat is Bobbie, owned by Norman Woolworth. It is also equipped with a six cylinder, 200 h.p. Hall Scott engine, and does over 40 miles. The boat made a very creditable showing in the racing at Manhasset Bay last summer

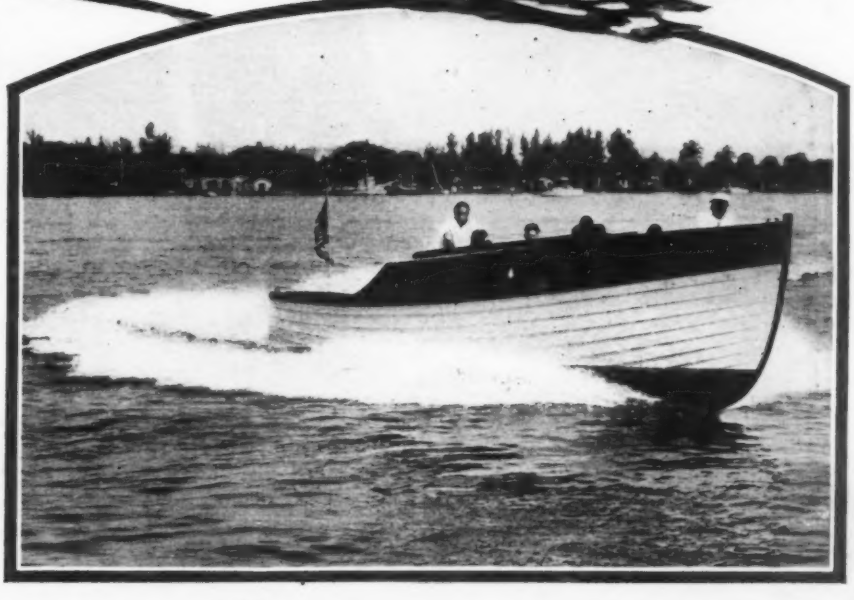


Give Reliable Service

A fast sight seeing boat loaded with tourists on Lake Hopatcong, N. J. The boat is owned by Nolan's Point Boat Garage, and carries 36 persons on a length of 40 feet. Powered with LM 4 Hall Scott marine engine



Perse, a new standardized Sea Sled runabout, owned by O. F. Woodward of Rochester and Palm Beach. She is 27½ feet long, and is regularly equipped with an LM 6 200 h. p. Hall Scott, which drives her better than 42 m. p.h. She was built by the Sea Sled Company of West Mystic, Conn.



Alice, a fast Palm Beach fishing skiff, owned by S. Harris, of New York. This boat was built by the Power Marine Ways Company, and is powered with a 200 h.p. Hall Scott engine. This type has proven to be one of the most popular developed during the last several years

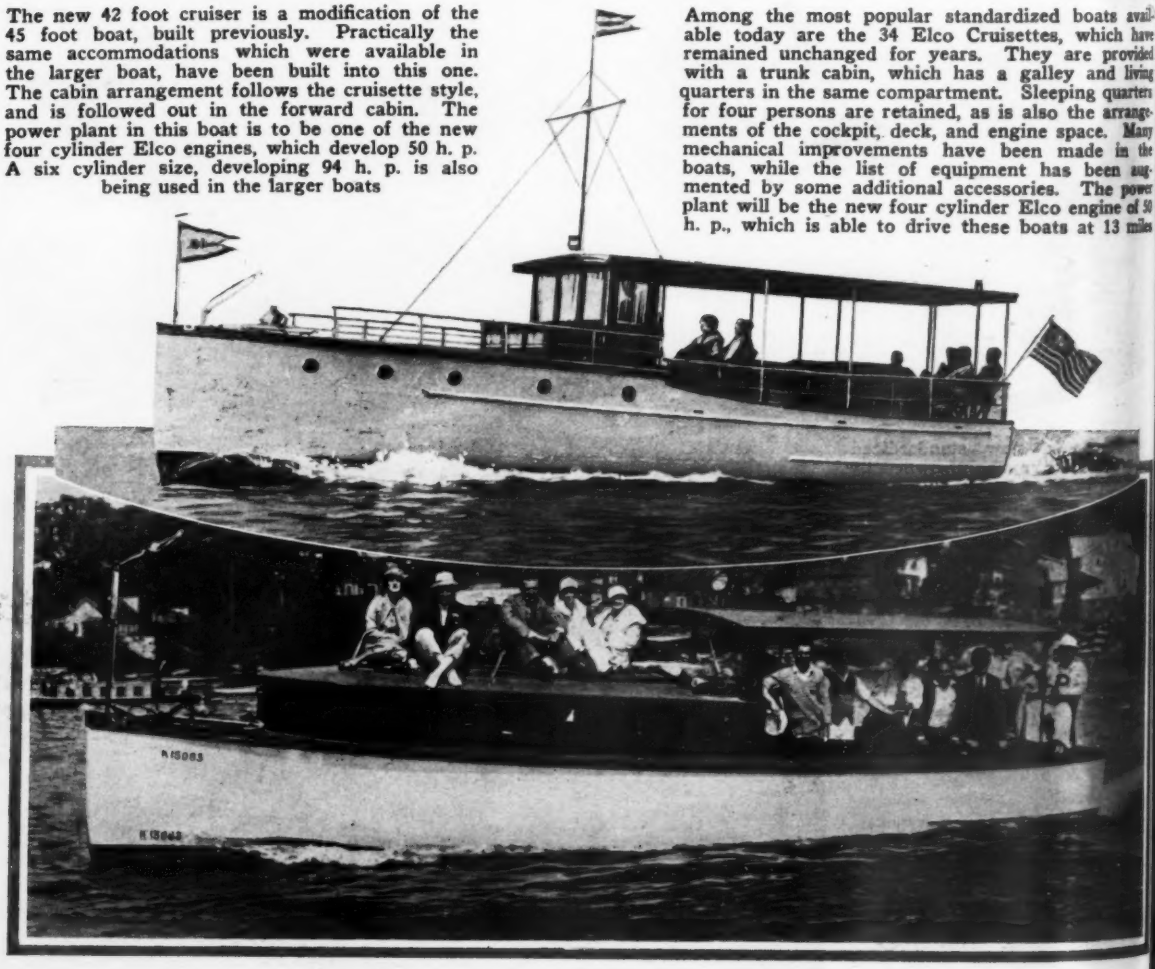
The popular little 26 foot Elco cruiser which is being built in greater quantities than ever before. While the design and construction have been unchanged, minor refinements have tended to improve the boat. The power plant is the four cylinder, model Z Gray engine, which is ample for the boat

Real Cruising Craft

Rounding Out the Elco Boat Company's Collection of Standardized Craft Are the 26, 34, and 42-Foot Cruisers

The new 42 foot cruiser is a modification of the 45 foot boat, built previously. Practically the same accommodations which were available in the larger boat, have been built into this one. The cabin arrangement follows the cruisette style, and is followed out in the forward cabin. The power plant in this boat is to be one of the new four cylinder Elco engines, which develop 50 h. p. A six cylinder size, developing 94 h. p. is also being used in the larger boats

Among the most popular standardized boats available today are the 34 Elco Cruisettes, which have remained unchanged for years. They are provided with a trunk cabin, which has a galley and living quarters in the same compartment. Sleeping quarters for four persons are retained, as is also the arrangements of the cockpit, deck, and engine space. Many mechanical improvements have been made in the boats, while the list of equipment has been augmented by some additional accessories. The power plant will be the new four cylinder Elco engine of 50 h. p., which is able to drive these boats at 13 miles

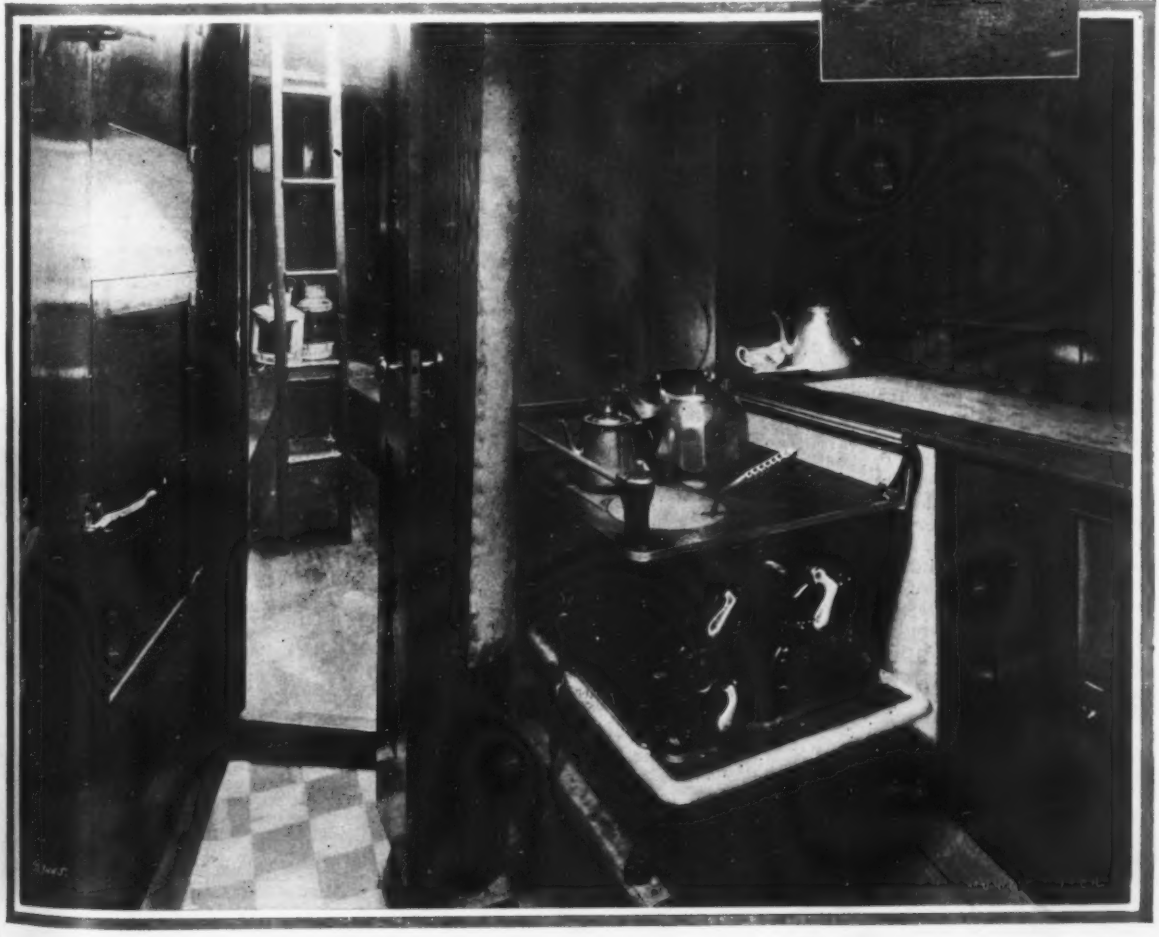


PRINCESS PAT
A Sea Going
Auxiliary

Ability to Go to Sea and Stay There is Conspicuous Tendency in Many Recent Craft

THE appeal of the auxiliary sailing craft is a powerful one to many yachtsmen. A recent boat which should bring joy to the heart of all deep sea sailors, is the schooner Princess Pat, built for J. Goodwin Hall of New York, by Hodgdon Brothers of East Boothbay, Maine, from designs by William H. Hand, Jr., of New Bedford, who has of recent years made a special study of this type of craft. Unfortunately the illustrations of the boat under sail do not show much action, as there was very little wind at the particular time they were made. Also due to difficulties in placing a camera, it was not possible to photograph a very excellent

Princess Pat is 61 feet 3 inches long, and carries a four cylinder Speedway engine for auxiliary power

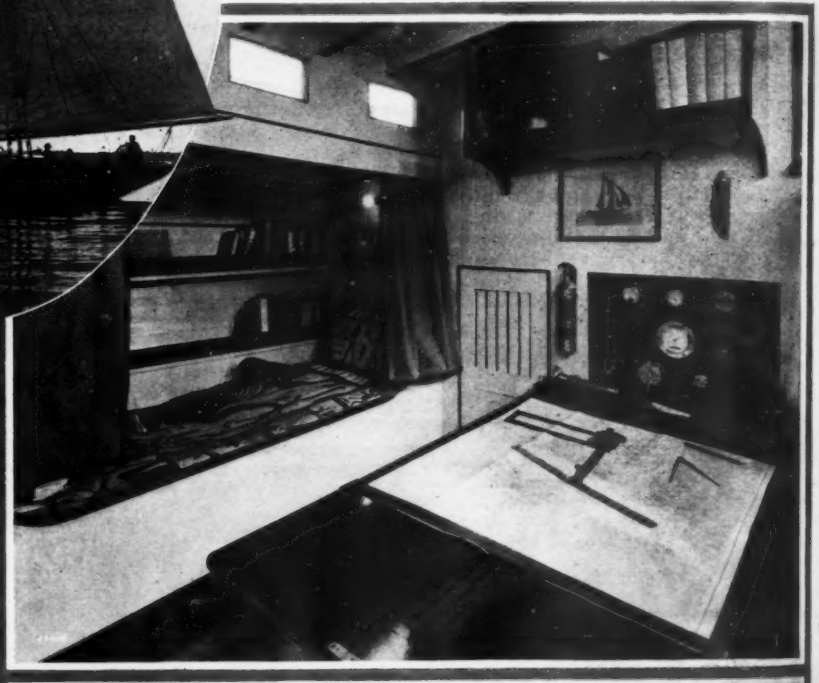


The galley in Princess Pat contains ample working space. It extends the full width of the boat

Photographs by M. Rosenfeld

Princess Pat was designed by Wm. H. Hand, Jr., and built by Hodgdon Brothers of East Boothway, Maine

The arrangement below decks is very practical. The large table in the saloon serves also as a chart table



The after cabin is arranged with a fixed berth and one transom berth, both of which are large and comfortable

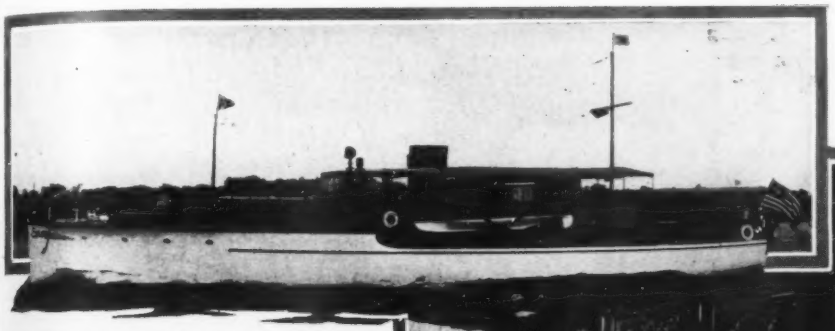
stateroom between the forwardward and after cabins.

The boat after her launching in August was commissioned, and extensive cruises were taken in her. She was found to be entirely satisfactory, perfectly seaworthy and comfortable under all conditions. There is installed in her a model M-4 Speedway engine, which turns over at about 700 revolutions, and drives her at 8¾ knots. This is very good for a boat of this size, as she is 61 feet 3 inches long, 15 feet 2 inches beam, and nearly 8 feet in draft. Her sail plan provides for a modern and handy rig, with 1,713 square feet in the lowers. The long pole main mast carries a topsail of 143 square feet. The deck trim is entirely of teak, and the finish below is white mahogany.

The arrangement below decks is complete and practical, and provides for two men in the forecastle. The galley is next aft, and extends the full width of the vessel. The main saloon comes between the fore and main mast, and is fitted with extension transoms and built-in berths. A stateroom with one double berth comes next, and abaft of this is an after cabin. Princess Pat can accommodate ten, including the crew. She carries a power tender, and is equipped with a Homelite electric plant for lighting purposes.

While Princess Pat is essentially a roomy, seagoing cruiser, she has clean lines, and is fast on all points of sailing. Unlike other schooners of this kind, she carries a large proportion of the ballast outside, and the displacement is proportionately less than other auxiliary cruisers of a similar type, which have been built in recent years.

RAMNA, A Modern Cruiser



Ramna is a new 91 foot cruising yacht, built by the Luders Marine Construction Company for Walter B. Lashar of Bridgeport. On her trial trip she made a speed of 14½ miles

THE new cruising yacht Ramna, recently completed for Walter B. Lashar, by the Luders Marine Construction Company, establishes a new standard of high class yacht construction. She is a double planked job throughout, with four watertight bulkheads of steel. Accommodations for the owner have been provided, consisting of four staterooms, one a double, and the others arranged to sleep two people. The dining saloon and the galley are on the same level in the deck house forward. They separate the culinary department from the owner's quarters and the crew's quarters forward. The machinery is contained between water tight bulkheads, and consists of two 8 by 11 inch, 150 h.p. Winton Diesel engines, for the main power plant, while a 7½ k.w. Winton generator furnishes power for auxiliaries.

The dining saloon is in the forward deck house and is most attractively finished in fumed English oak of the Jacobean period, with elaborate carvings.

A feature of the boat is the comfortable deck house which is arranged with large double doors on the after end. These can be opened so that a large sheltered deck space is obtained for pleasant weather use

All the W

Interesting Illustrations of Boating Activities from All Corners of the Earth Show That Boats at Home and Abroad Are Still the Popular Recreation of All People

Photographs by International, Fotograms, The Sun, Sydney, and Topical Press, L

Wm. K. Vanderbilt on board his Diesel yacht Ara at Miami on his return from a wonderful tour through the West Indies

C. B. Hollis of Brooklyn has made a remarkable electrically driven model yacht, which is equipped with radio, electric lights, and other modern fittings. It is called Pioneer, and is 40 inches in length

The newest Rotor yacht, which is shown racing with ordinary sailing craft in Germany. The boat handles and maneuvers quite easily

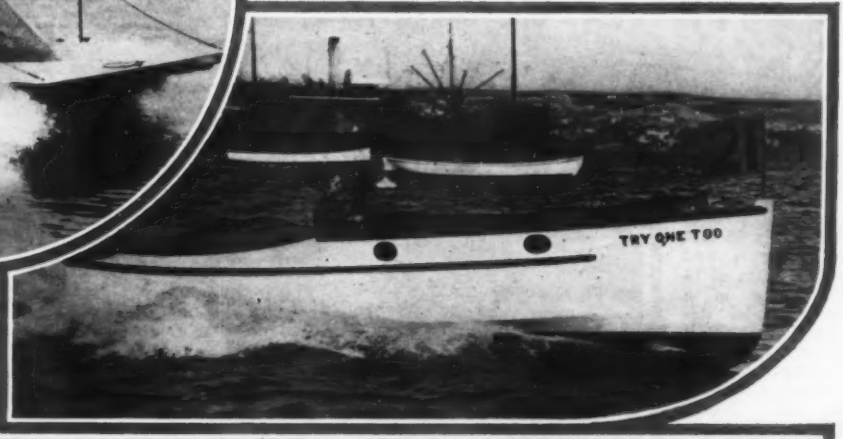
An amphibious auto, or a dry-land boat. This strange vehicle is equally at home ashore or afloat. They can be hired in England and used for trips about town and then driven into the water for a ride out to sea

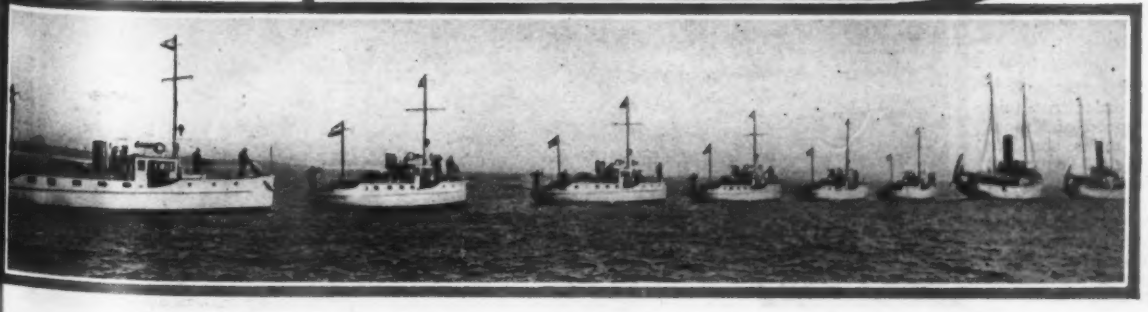
World Plays Boats

Boating is popular at Ascot in England, as the illustration shows. Throngs of boating parties being raised at Boulter's Lock during a sunshiny Sunday afternoon. The use of these canals by commercial traffic is very light, and the pleasure-seekers make the most of the possibilities. It would seem to be a good field for outboard engines

A novel type craft built for special service by the Navy. At San Diego, the training planes frequently land in the mud flats near the naval station. This craft was developed to permit approaching and rescuing crews

A young skipper piloting a boat in a race for ladies at the Motor Yacht Club's Regatta at Sydney, Australia. Miss Marjory Pritchard piloted Try-One-Too, and won second place





German built boats which form the mainstay of Jugo-Slavia's navy, and protect its coast

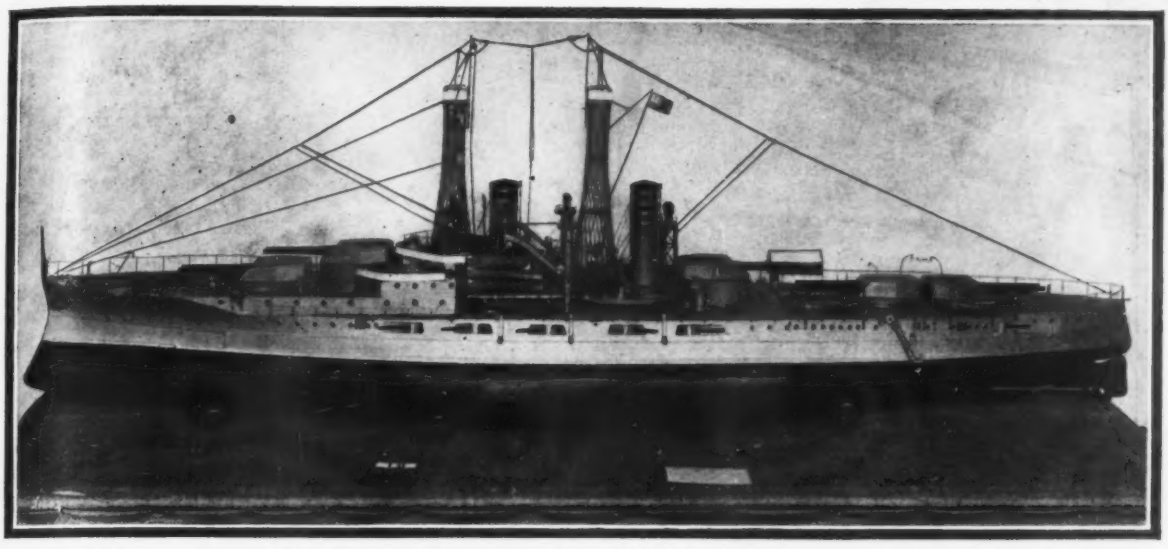
Accommodations are spacious in all departments, while luxurious appointments and furnishings are apparent. The deck saloon provides a day time lounge while the staterooms and dining saloon are below decks. There are several staterooms in the owner's apartments with crew's quarters in the forward part of the ship

Frances Big One

Frances is 65 feet in length and with a beam of 14 feet. She is a stock model designed and built by the Matthews Company of Port Clinton, Ohio, for G. H. Wood, Monroe, Michigan

In order to attain a speed of almost 15 miles she has been equipped with a pair of Sterling Dolphin, medium six cylinder engines, which produces ample power without excessive revolutions

Photographs by M. Rosenfeld



Working model of the U. S. S. Dakota. Controllable by radio waves. Constructed by Charles A. Myers, Jr.

Fashioning A SHIP'S MODEL

By Captain E. Armitage McCann

Craftsmanship of an Unusual Kind Enters into the Production of Miniature Ships, with the Addition of an Infinity of Patience

ONE sees and admires a thing of beauty, but unless it be related to our own line of endeavor, whether it is a plate, a house or a ship, how rarely does one pause to consider the thought, inspiration and labor given to it in the making.

This thought applies particularly to ship models. Only the few can make the worthwhile example, and that after an infinity of patient labor.

There is first the gathering in of data about the desired vessel and the making of accurate scale drawings of each part. Then comes the assembling from here, there, and everywhere of a quantity of material—of hardwoods and soft; of brass, copper and iron; of wire, chain and many grades of cord; of the finest of nails, brads, pins and needles; of silk, linen and cotton; of varnishes and a whole palette of color; all of which go to the making of a real ship and her model.

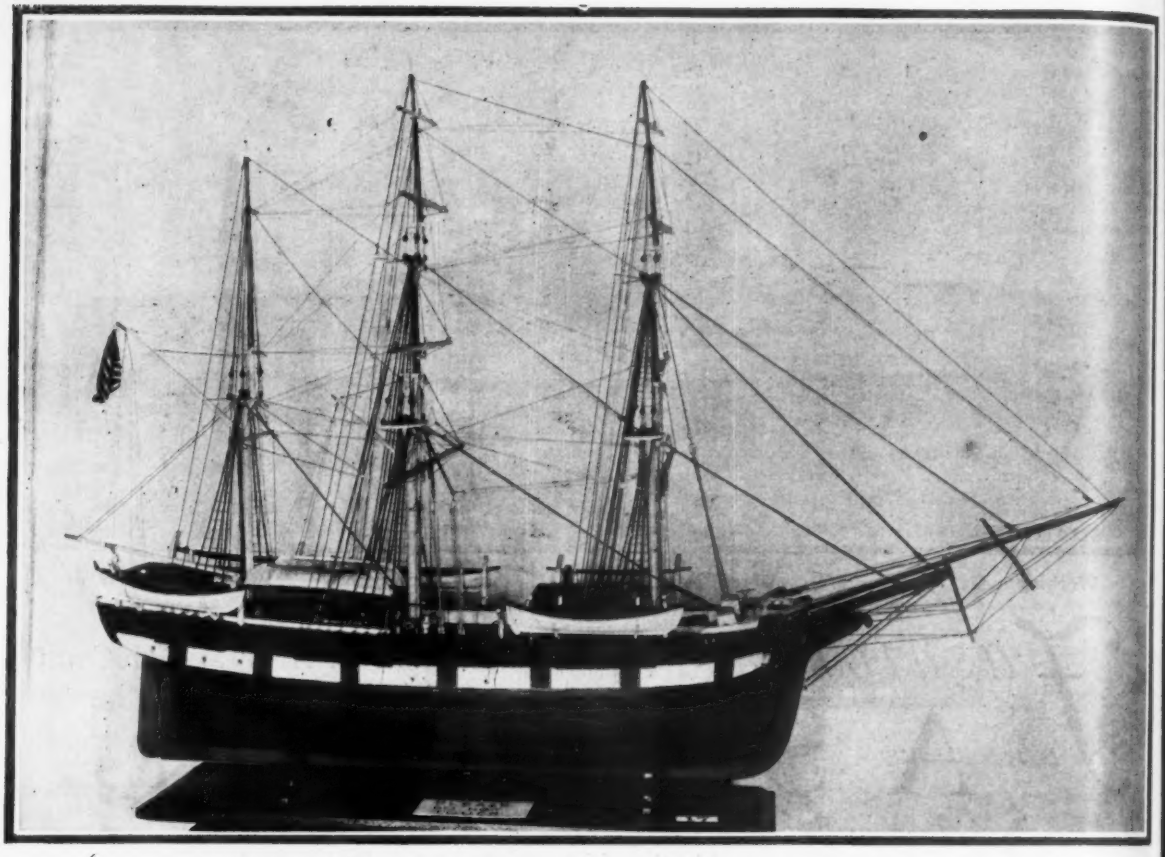
Following which the work commences of fashioning these parts into one harmonious whole, which shall be an exact miniature replica of the real vessel.

Models have been made by all manner of men, since the seventeenth century. Some of the finest were built in the Royal Dockyards of England, France and Holland, some were made by prisoners of war during the Napoleonic wars and by similar workmen in equipped workshops. Many models during the clipper period were made by sailors of the vessels they sailed on, and many have been and are being made by ex-sailors and landsmen.

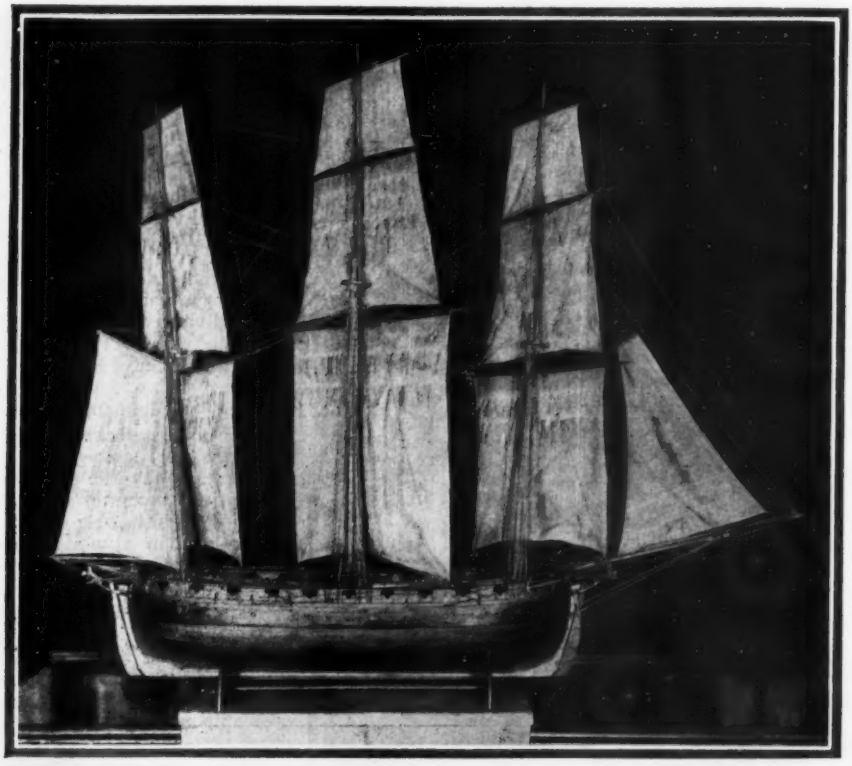
All of these have entailed months, perhaps years of patient, pleasurable labor, resulting sometimes in a quaint travesty of a ship, or at others in a model, historically accurate and beautiful to look upon.

There is at present an increasing number of men ashore essaying this task with varying success. It is very frequently a later phase of ship model collecting.

Model of the Spanish Galleon, La Santa Isabella, constructed by E. W. Ottie



Model of the whaling bark, Lagoda, of New Bedford, Mass., owned by Cyril Crimmins



French Admiralty model of a double-ended ship proposed by Admiral Willaumez, The Amphisdrome, owned by Junius S. Morgan, Jr.

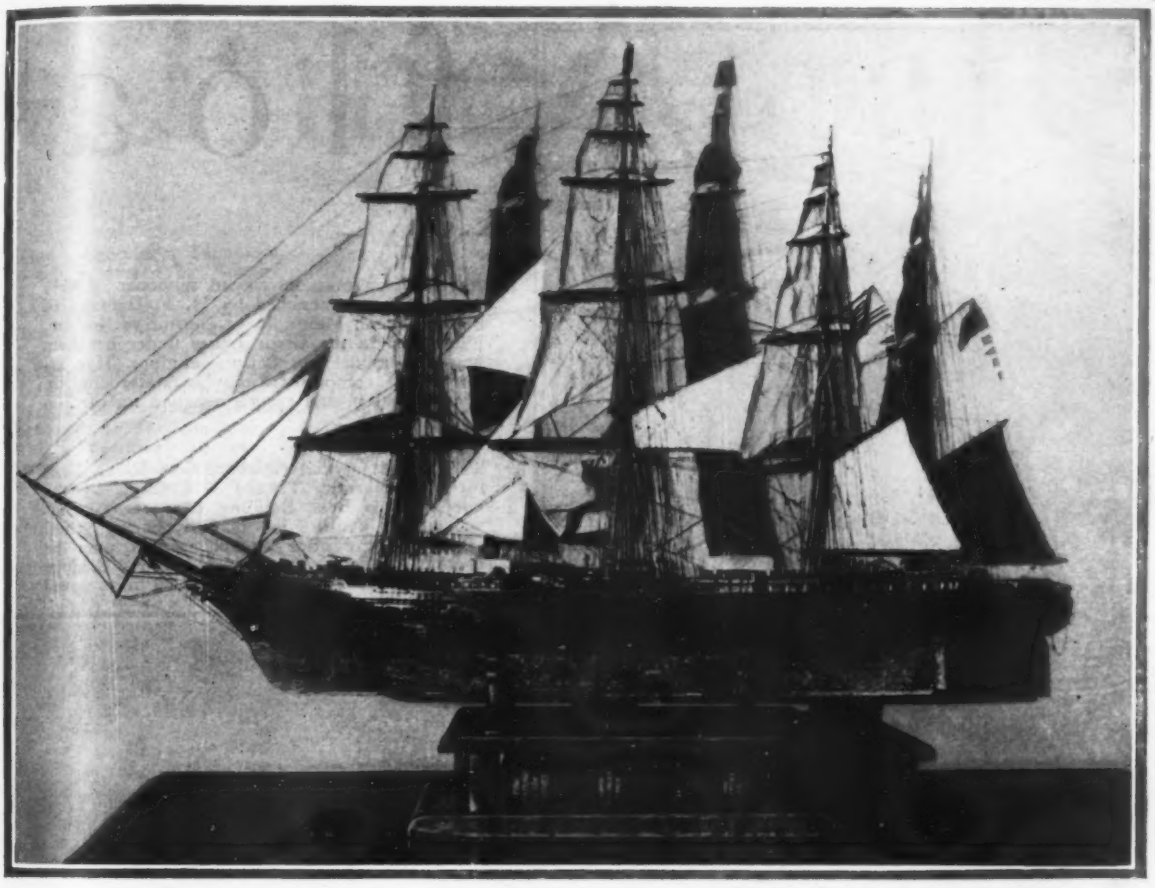
The collector usually starts with one model, because he is interested in ships, because the craftsmanship or its lines please him, or perhaps, just because it is antique, or worse, that it is the fashion to have one.

The first model acquired is not, as a rule, a very good one, but, provided it has any truth in it, and is not just an ornament with a ship motif, it will grow on its owner. If he have it in one room he will find that he misses it in another, and, having meanwhile studied up the subject of ships, it is not long before he possesses a second. Thus it goes on; others and better are acquired and the poorer ones weeded out, until the time usually arrives when he wants to make one for himself.

The busy man will not be able to put very much time into his labor of love; thus his ship is liable to be on the stocks, sometimes for years. Every stage, however, of the building is interesting and his model will be beautiful and decorative in each stage of construction.

Most things in the making

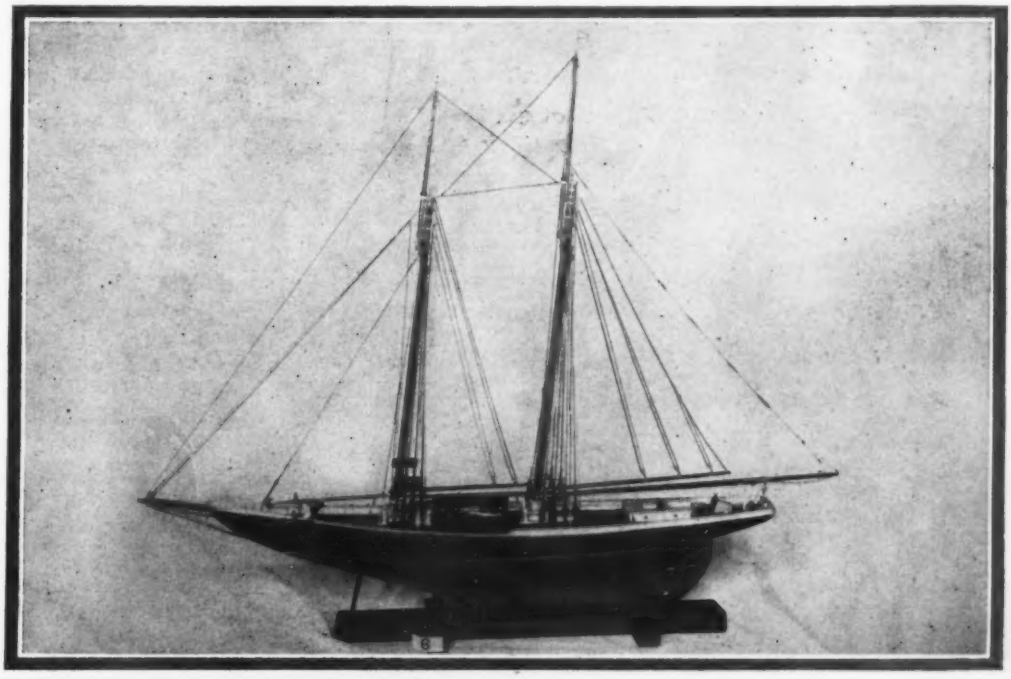
Photographed by Drix Duryea



Fortune of the Indies, constructed by E. Armitage McCann, and owned by Edith Ballinger Price

have to be kept out of sight and strictly confined to the workroom. Not so the ship model; from the time the keel is laid to the hoisting of the colors at the gaff she is graceful and can take her place in one's living rooms, worthy to consort with the most precious works of art.

Let it not be thought that on this account ship model building is a task to be lightly undertaken. A labor started should be finished some time. In this case that means a large amount of patient toil, at which one may work fast but may not hurry. One must have the capacity to spend hours making a part perhaps no bigger than the proverbial mustard seed, only to break or lose it just when finished, and be able to start again without excessive vexation. One must be able to do carpentry and joinery on the smallest scale—but always (*Continued on page 344*)



Model of the fishing schooner, Columbia, built by Chas. G. Davis and owned by Charles R. Patterson

Afloat

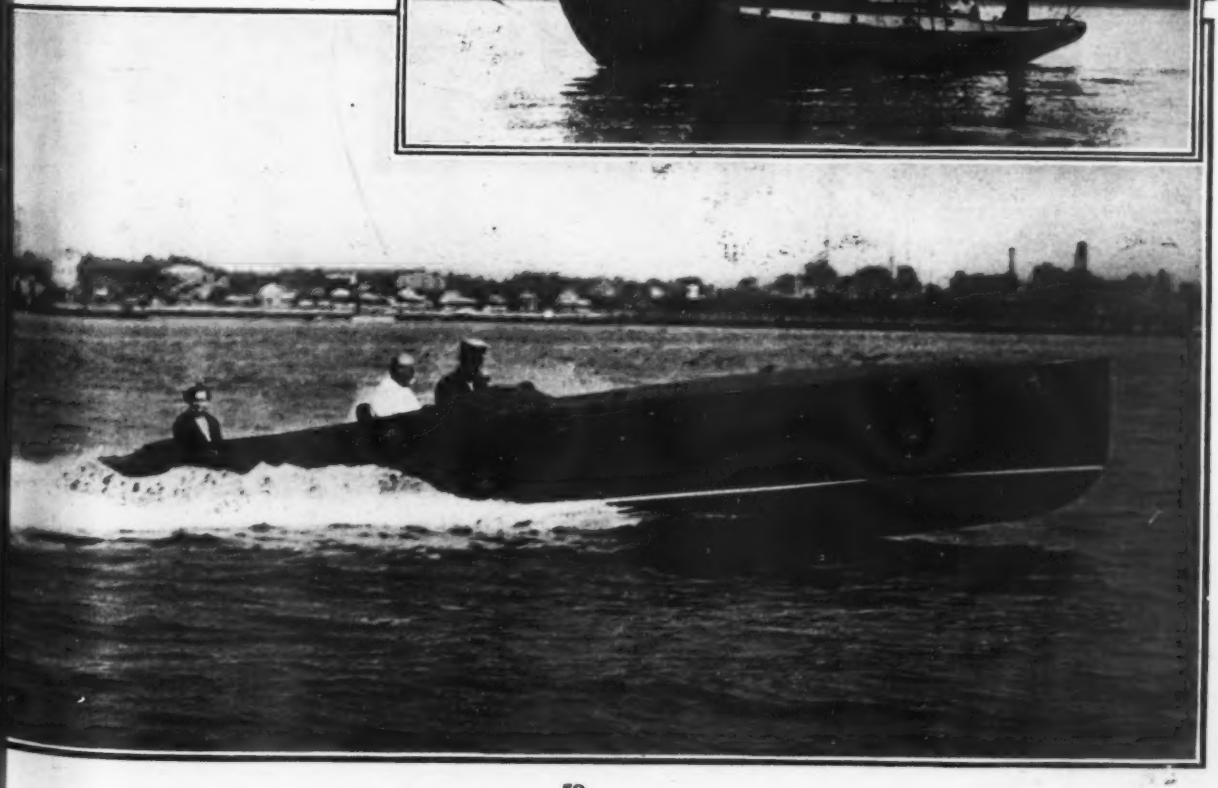
An auxiliary Marconi rigged schooner of 41½ feet in length, launched by H. F. Gamage of South Bristol, Maine, for a Detroit yachtsman. She sailed to the Great Lakes under her own power, a model F-4 Scripps engine. Her arrangement comprises a double stateroom aft, main cabin, and crew's quarters forward

The 26 foot special runabout Surf Rider, built for Miss Dorothy Thorne of Chicago, by the Great Lakes Boat Building Corporation, Milwaukee. A feature is the disappearing windshield for the after cockpit, which may be dropped out of sight quickly. An F-6 Scripps engine furnishes the power, and 30 miles speed

ton Fine Craft

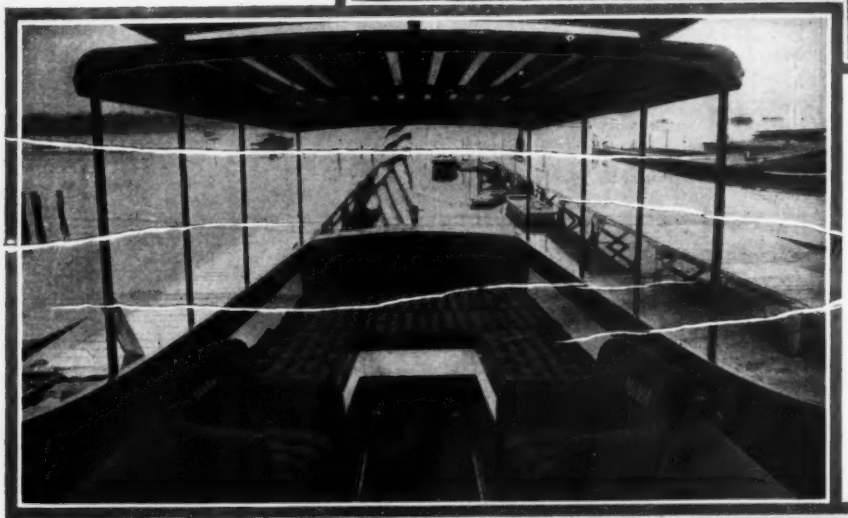
The schooner Sagamore, which is owned by Edward W. Madeira, and powered with an F-4 Scripps engine. She is an able seaworthy craft of the fisherman type built by Charles A. Morse of Thomaston, Me., from designs by John G. Alden. She is just short of 44 feet in length, with a beam of 11 feet 3 inches. The Scripps engine drives her in a most satisfactory manner

The runabout below was built according to the design for a 28 foot Hacker boat, published in MoToR BoatinG several years ago. Commodore H. C. Granneman, the owner, has powered the boat with a model E-6 high speed Scripps engine. On her trial trips she went better than 30 miles with the throttle only opened about half, and since then has done much better



HAPPY DAZE *for* Fast Cruising

A smart little 33-footer has just been completed by the Red Bank Yacht Works for F. A. Seide of Seabright. She is a new development in lap strake cruisers with a double planked bottom, and intended for high speed driving



Happy Daze is powered with a six-cylinder Hall-Scott marine engine of 200 h.p. She easily develops 25 m.p.h. with the motor operating a 22-inch diameter, 16-inch pitch Columbian propeller, at 1750 r.p.m.

The cabin arrangement of this boat follows very closely the arrangement of the standardized Dory cruiser, built by this company, with the exception that the cockpit is very much larger, having side lazy back seats, and a bridge deck over the engine. The entire cockpit is enclosed by a windshield

SENORA A Schooner Fair

Senora has a wonderful expanse of deck space for a schooner of her size

THE auxiliary schooner Senora, which was completed during the summer for Henry E. Bodman of Detroit, is a semi-fisherman type, with moderate overhangings to make a better looking craft than the usual fisherman. She was designed by Charles D. Mower, and built by F. F. Pendleton in Maine. Her length is 70 feet overall, with fifty feet on the water line. Her cabin arrangements are unusual for a boat of her length and she has a large main cabin, a double stateroom aft, two single staterooms, and an abundance of locker room. Quarters for the captain and crew of four are forward. Her power plant is a six cylinder Kermath engine, which drives her very close to ten miles in still water. A two blade Hyde propeller is located in the opening of the dead wood, while a little Homelite generating set furnishes all the power necessary for lights, etc.

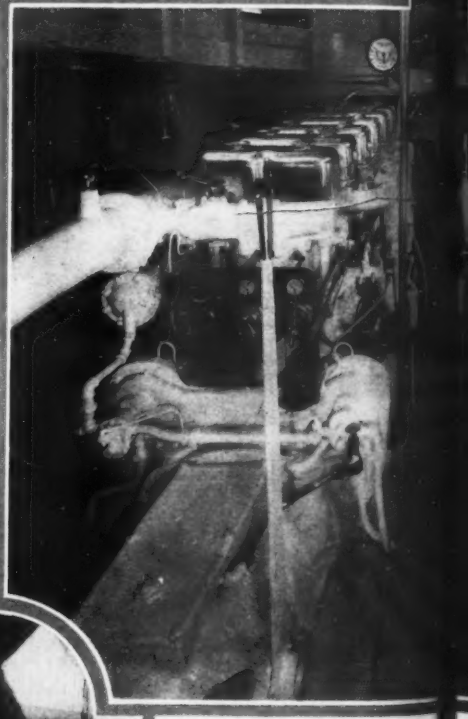
While the sails are doing all the work in this illustration, a Kermath engine is used for auxiliary propulsion

A Pair of Speedy

Margaret F II, one of a pair of new boats recently completed from designs by J. H. Wells, Inc.

Rugged Stability Kept Well Within the Bounds of Graceful Lines, Bespeaks of Clever Design Where Strength is Camouflaged in Artistic Curves

AN interesting pair of boats have recently been delivered to their owners. John H. Wells, Inc., the designer of these craft, has used the identical hulls, built the boats at different yards, and powered them with different engines. In all important particulars, however, the boats are identical, and interesting comparison between the two is possible. Margaret F II, one of this pair, was built at the Consolidated Shipyards for Lawrence P. Fisher, and was equipped with two 300 h. p. high-speed Speedway engines, while Frolic II, the twin boat, was built for Walter P. Chrysler at the George Lawley & Son Corporation of Boston, and equipped with a pair of 350 h.p.



In the engine room of Margaret

Winton engines. The speed of these boats is 28.7 miles light, while when loaded for cruising they can do 26 miles. Their dimensions are 70 feet length and 13 feet beam.

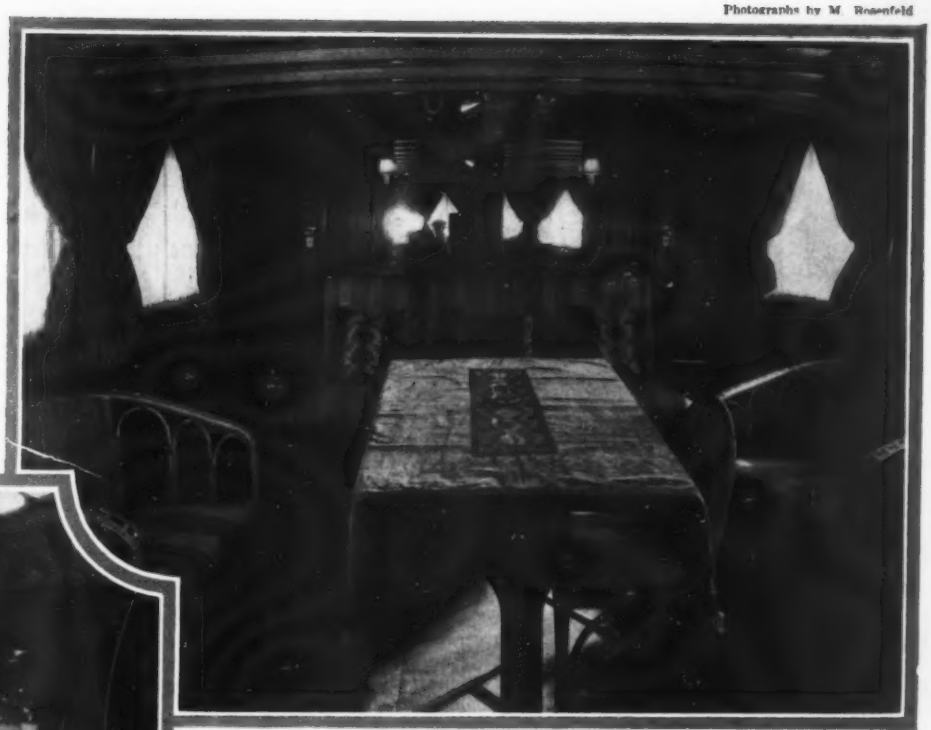
Both boats are rather heavy in construction, as safe, comfortable craft were wanted with speed a necessity, but

A Brunswick talking machine and a radio set are built-in

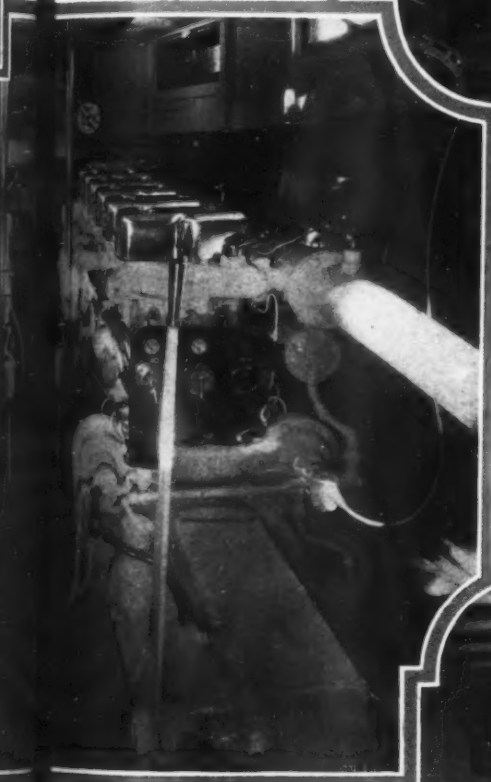
dy Craft

Photographs by M. Rosenfeld

not sacrificed to safety. The accommodations and equipment permits of these boats being classed as heavy cruisers of the day type. The construction follows the usual keel type with double planking



A built-in seat and cosy wicker chairs provide comfort in the deck house.



are two 300 h.p. Speedway engines

throughout. The outside trim is all in mahogany, while the finish below decks is in mahogany and enamel. A novelty in boat construction is the arrangement of the windows, which follows the new Fisher body type. That is, all glass with no sash, giving a maximum opening.

The layout provides for the following. beginning at the bow: Large forward cockpit with deep leather upholstery on seats with a seating capacity for eight persons. The companionway leading to the owners' cabin arranged with seats on either side, making

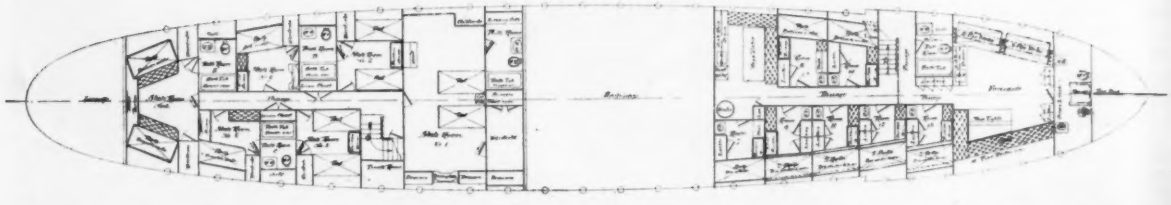
up into four berths, in addition to which there are two large wardrobes. On port side is a large galley separated by water-tight bulkheads, having a Protane gas stove, sink, hot and cold water, dish racks, lockers, and a Fridgidaire ice plant.

The Winton motors were equipped with pulsator system of gasoline supply, while the Speedway motors have gasoline pumps directly mounted on the motors, pumping from the main tanks to the supply tanks. The lighting system is a four-cylinder 1½ k.w. Universal, with Edison batteries. Delco automatic water system is also installed in each boat.

The cabin below is arranged to provide four berths in addition to ample wardrobe space

ATHERO II

Newest Diesel Yachts Are Attractive Sea Going Craft with Speed and Most Modern Equipment



Arrangement plan of the 162 foot Diesel yacht Athero II being built by Geo. Lawley & Son Corp'n

THE design for Athero II, a new 170 foot Diesel yacht, being built by Geo. Lawley & Son Corp'n, for J. L. Livermore, from designs by Henry J. Gielow, is planned for a maximum speed of 17 m.p.h., which requires a shaft horse power of 1,600. A pair of Bessemer Diesel type engines, each having six cylinders, designed for normal duty at 257 r. p. m., developing 800 h. p. in each motor, carefully balanced with ample bearings so as to insure their running cool under all conditions, were selected. These engines are well balanced and will be fitted on heavy girders built into the hull, strongly braced to resist and absorb all motion and vibration.

The hull is sub-divided into five compartments by means of four transverse water tight bulkheads, all of which will be really water tight and proof against collision conditions by girders of ample strength. Under the cabin floors, both forward and aft of the machinery space will be transverse fuel compartments built into the hull, forming an integral part of the hull, the top being 18 inches below the cabin floors to permit cleaning and painting when required.

In laying out the owner's and guests' accommodations, the object in view has been to obtain reasonably large state rooms, the drawing showing this arrangement clearly. The yacht will have a deck house, constructed of steel, 80 feet long with a mean width of 20 feet in the clear. The house will be covered by a continuous deck, extending the full width of the boat, making a fine promenade deck.

The dining room is forward on the main deck, 24 feet long, 18 feet wide with buffet side board and other incidentals in the after end. The steward's pantry is aft of the dining room with ice box, dish racks, shelves, sink, etc., and dumb waiter leading down to the galley and store room. The steward's room and trunk room are also on the main deck. The living room is in the after end of the deck house 25½ feet long by 20 feet wide, with the furniture and arrangements worked out in a satisfactory way.

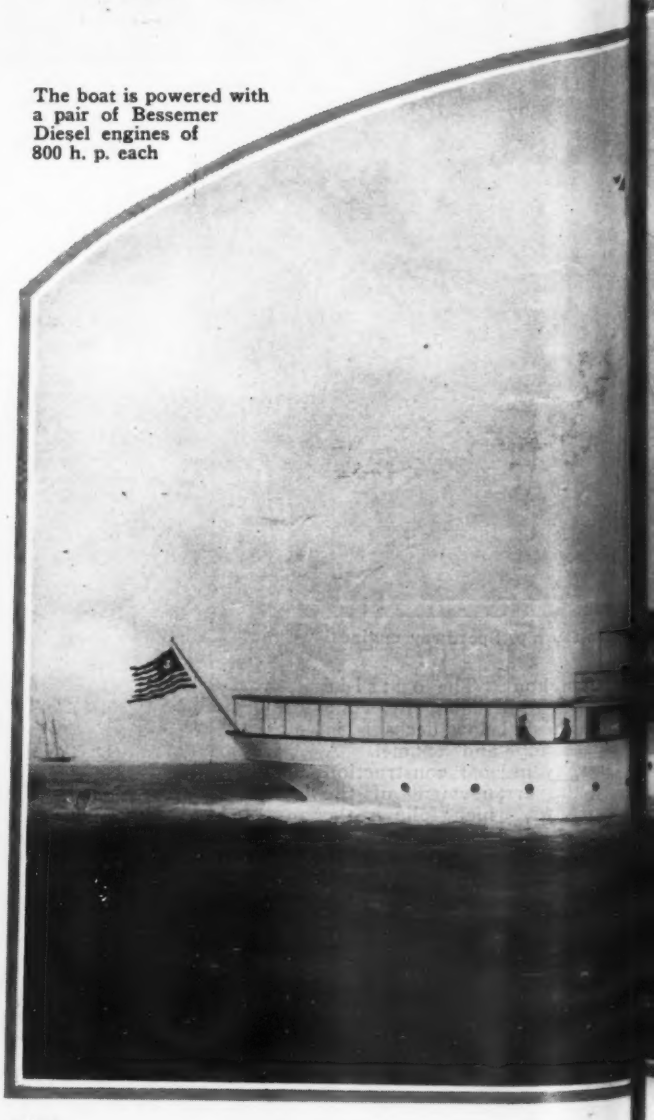
In addition to the natural ventilation, the owner's and crew's quarters, will be ventilated and heated by the Thermo-Fan system, one electric fan for the owner's quarters and one for the officers' and crew's quarters, air driven over piped coils, heated by hot water in cold weather and arranged to circulate sea water through them in hot weather.

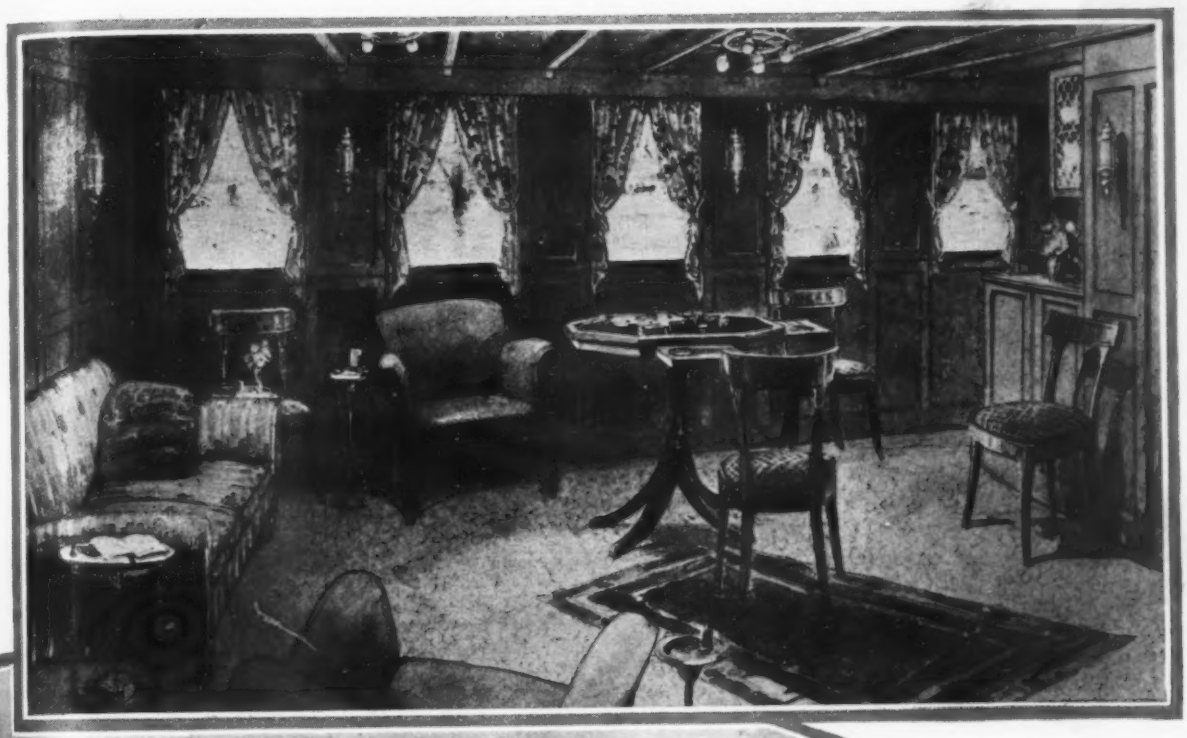
Propellers are of the Hyde four blade true screw type, faces of blades machined to the designed pitch, of Manganese bronze, right and left hand.

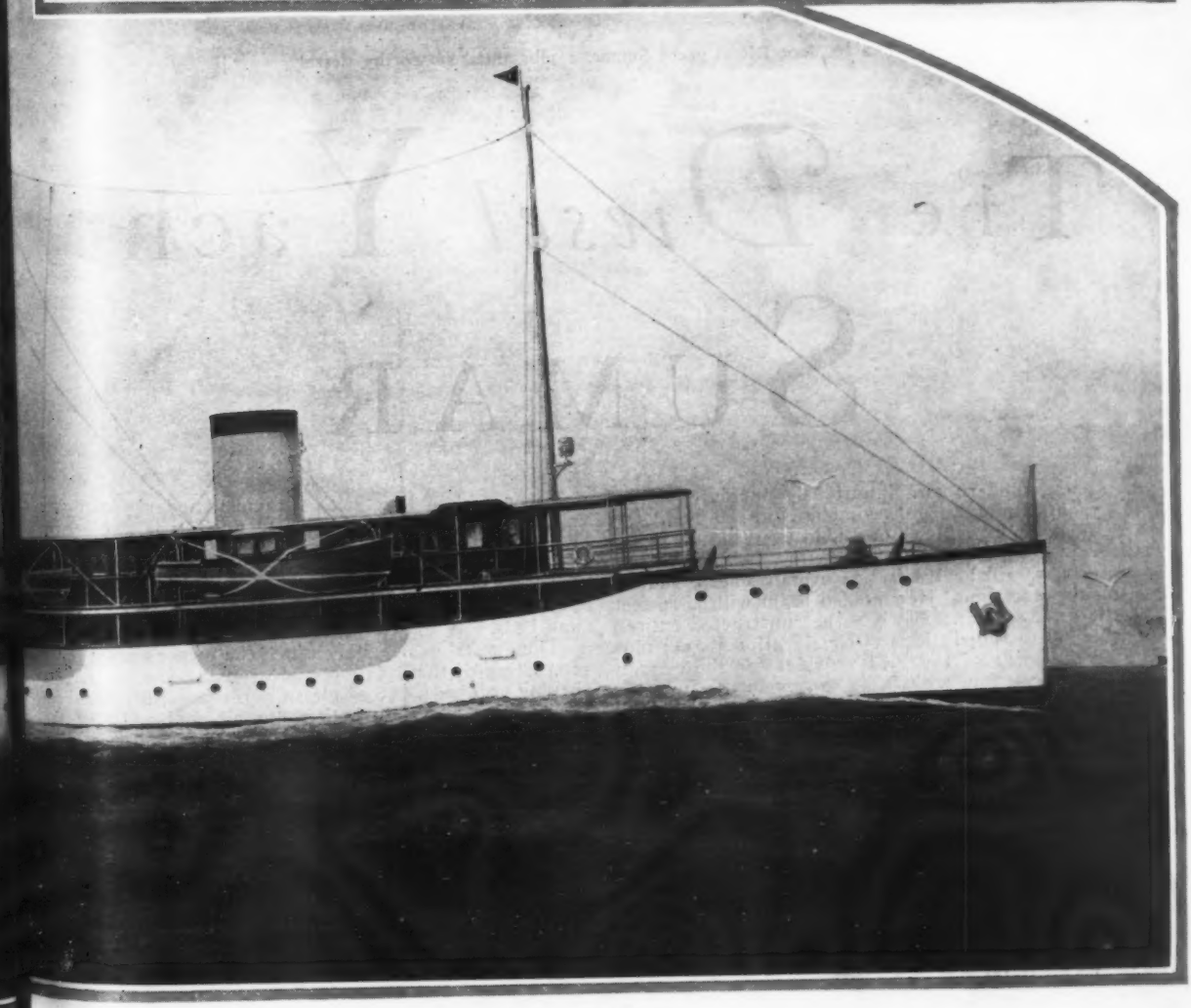
Refrigerating plant is of the Brunswick-Kroeschell type of capacity to supply ample refrigeration when operated not more than 8 hours out of every 24 hours and also to supply about 100 pounds of ice daily for table use.

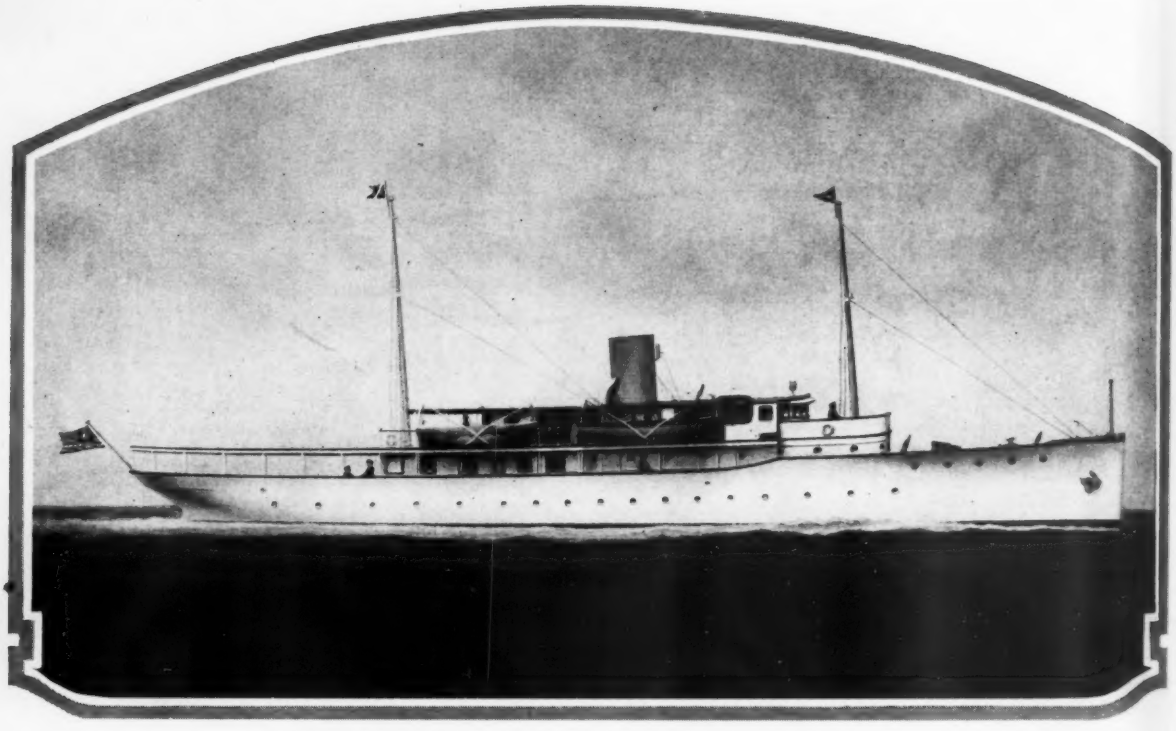
The smoking room on Athero II will be laid out and furnished in a most restful style

The boat is powered with a pair of Bessemer Diesel engines of 800 h. p. each









The 160 foot Diesel yacht Sumar, a substantial seaworthy vessel

The *Diesel* Yacht SUMAR

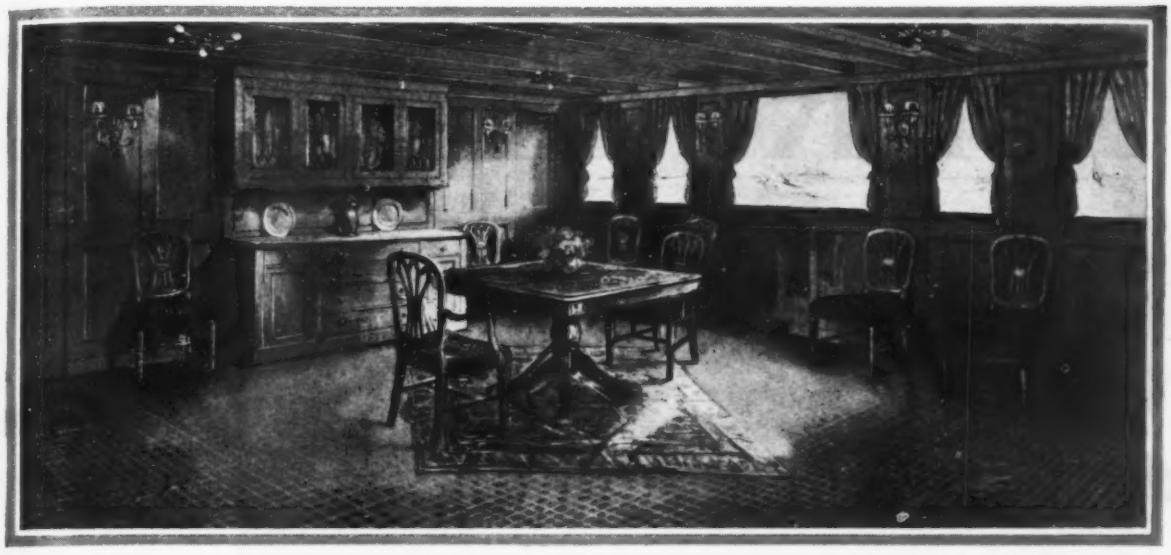
ALMOST modern and luxuriously appointed Diesel yacht is rapidly being completed at the Todd Dry Docks in Brooklyn, for David C. Whitney of Detroit, from designs by Henry J. Gielow, Inc. This craft, called Sumar, will be 160 feet in overall length, and 152 feet on the waterline. Her molded beam will be 26 feet, and the draft 12 feet. She is to be constructed entirely of steel, and to Lloyd's highest classification 100 A1 plus. The arrangement of the boat provides for the crew in the forward portion, with berth arrangements for eight men, with toilets, lavatories, showers, and individual steel wardrobes. Six staterooms are provided, giving accommodations for twelve men in the officer's quarters. These will be occupied by the Chief Engineer, mates, cook, steward, assistant engineer, etc. The mess room for the officers, located just forward of the galley, which is on the main deck, equipped with a range, Arcola hot water heater, refrigerator for day stores, and all necessary lockers, dressers, sinks, etc.

The owner's quarters are aft of the main engines, and are separated from the engine room by means of a double steel insulated bulkhead. Further separation is secured by placing the owner's bathroom between the engine room and his stateroom. This bathroom is well equipped, white porcelain tiles, with the most modern up-to-date plumbing fixtures of the house flush type, with large wardrobe located on starboard side. The owner's state room occupies the full width of the boat, 11 feet long fore and aft. This will have the usual equipment of bureaus, chiffoniers, dressing tables, desks, night tables and beds.

The guests' quarters are aft of the owner's state room, consisting of three double state rooms, each state room having two beds, two single state rooms with single beds and having access to bath room, all equipped with the usual wardrobes, bureaus, dressing tables, chiffoniers, etc.

On the main deck will be a continuous steel deck house, the forward part of which will be occupied by the dining room. A built-in side board and buffet is on the after bulkhead of the dining room, the pantry is located just aft of the dining room with lockers on the starboard side of the passage way for oil skins, guns and fishing rods. On the port side is the entrance to the engine room, a large deck locker, a fine big trunk room and maid's room, also battery room. The after end of the house is occupied by the living room while a large quarter deck aft is provided of over 50 feet in length.

The upper deck is carried out over the house on the



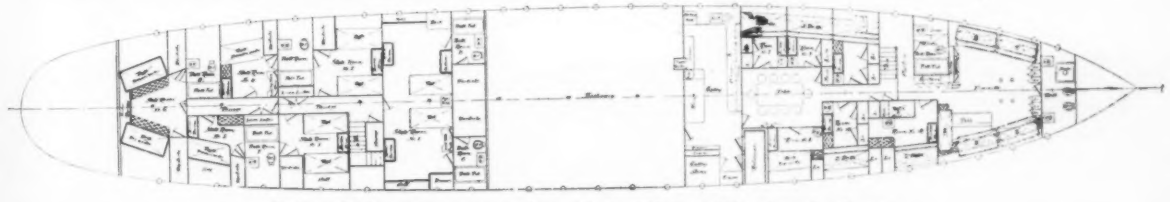
The dining saloon occupies the entire forward portion of the deck house and will be elaborately furnished.

main deck to the sides of the ship, forming a wonderful sun or promenade deck approximately 85 feet long by 27 feet wide. On this deck are two teak houses, the forward one containing pilot house, chart room and Captain's state room and bath, the after one used as a wireless room.

In preparing the designs of this craft, the architects had in mind at all times the conditions under which this yacht was to be operated, namely sea worthiness and ability to cruise around the world in face of any weather and for this reason special care and attention were given to the numerous little details which make for the owner's comfort and pleasure.

In the engine room is provided the pair of 6 cylinder, Bessemer Diesel type engines developing 420 h. p. at 250 r. p. m. In addition to this there will be two Bessemer Diesel electric generators of 30 k. w. each—all other auxiliaries necessary for the proper and up-to-date installation of a craft of this type. All the pump equipment in connection with the main engine, fuel, etc., will be supplied by the Kerr Machinery Company.

The fuel oil capacity will be sufficient to give Sumar a cruising radius of approximately 10,000 miles with fresh water capacity of equal amount.



Below decks arrangement plans of the 160 foot Diesel yacht Sumar

The entire after end of the deck house will be occupied by the living room. An unusually large space furnished and decorated in a most attractive way

KERMATHS D

The Tendency
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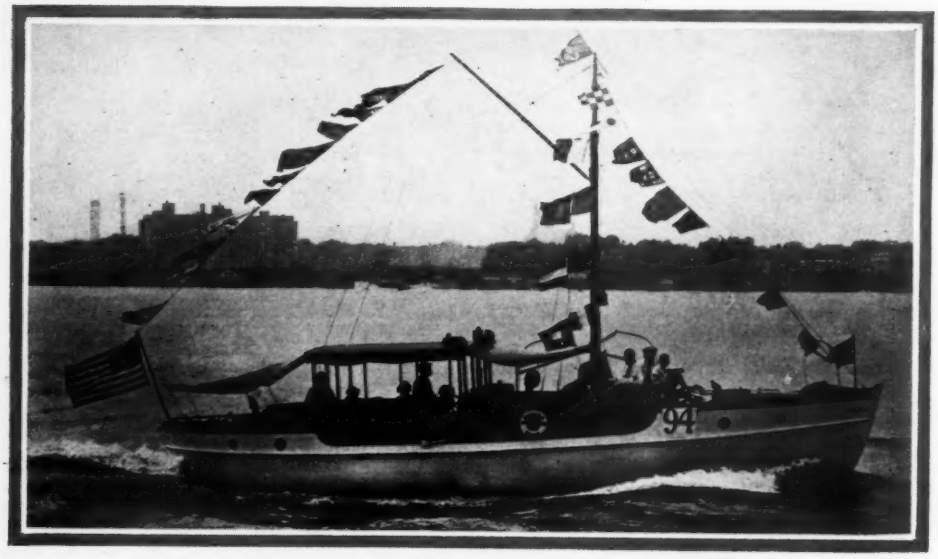

Awandra, a 42 foot cruiser, owned by H. C. Van Sickle of Detroit, which was repowered with 65 h. p. Kermath. The lighter weight power plant increased her speed to 11 m. p. h.

At the Detroit Regatta last fall, a feature was the race for Kermath powered cruisers. Many large and heavy boats are now equipped with the high speed vibrationless engines with entire satisfaction. Some of the large cruisers use two and three engines of the 65 h. p. type

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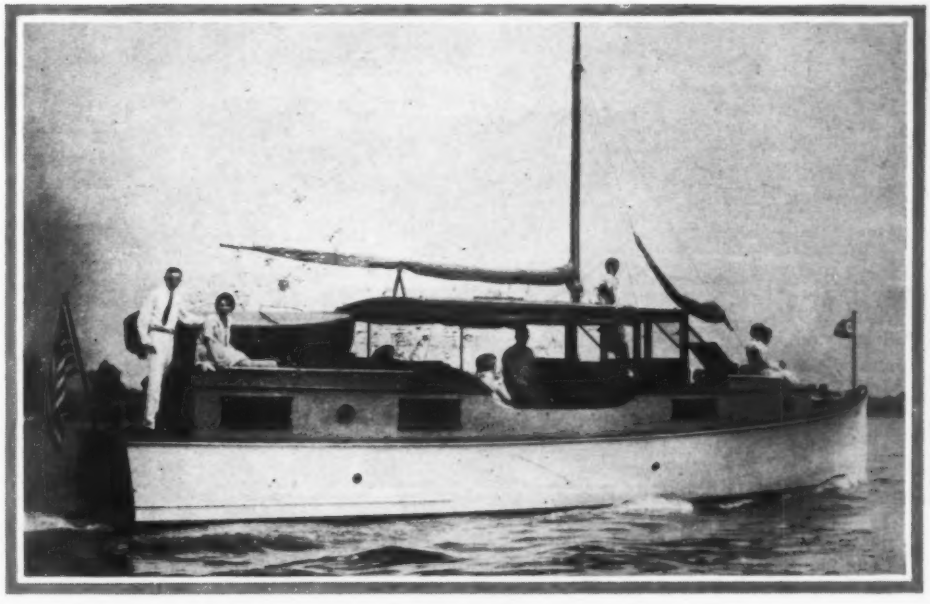

Photographs by M. Rosenfeld

Grathea, one of the standardized 38 foot Matthews cruisers, built for E. I. Strong, Buick Motor Company. This boat has been modified in its cabin arrangement to provide two separate cabins forward and aft. The power plant, however, is the standard 65 h. p. Kermath marine engine

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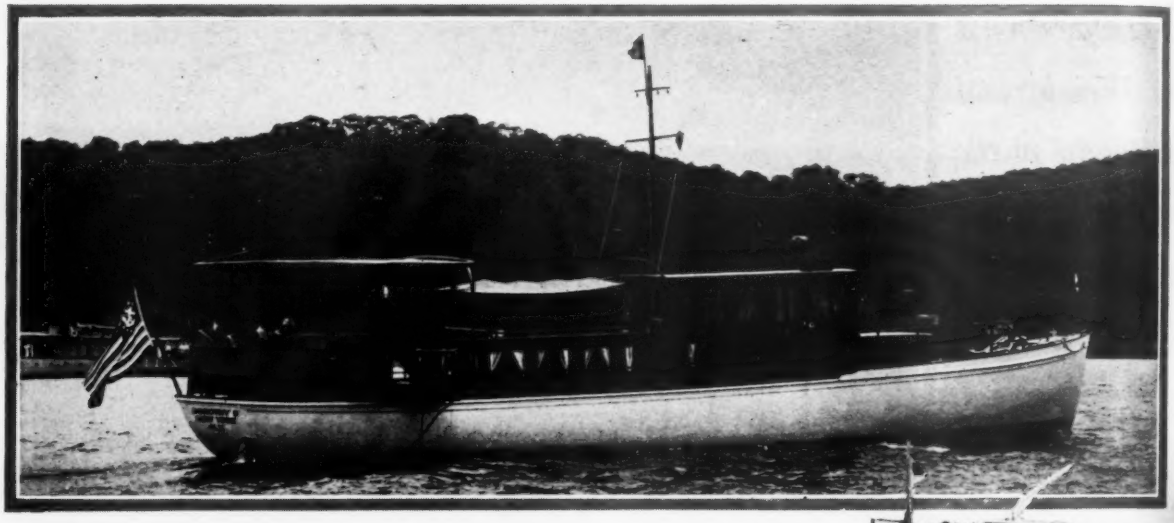
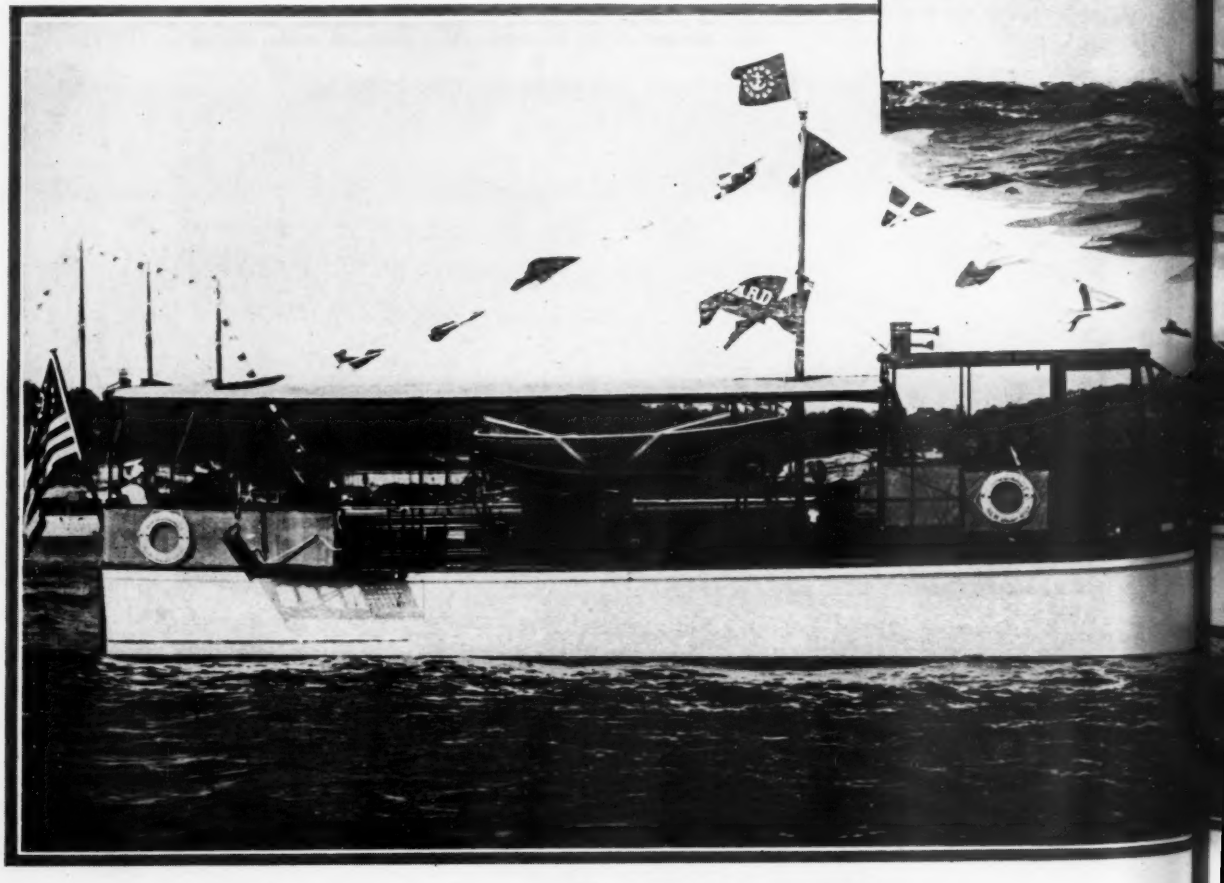
How *the* Big Boys

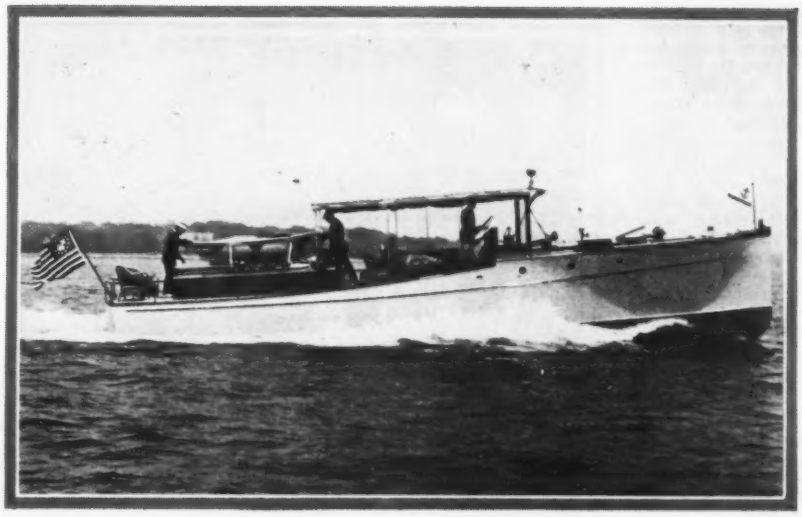


Dorothy B, a 55 foot cruiser, owned by George L. Kilmer of the Larchmont Yacht Club. She was designed and built by the Consolidated Shipbuilding Corporation, and was formerly called Zipalong. She has been equipped with a six cylinder Sterling engine of 5½ inch bore and 6¾ inch stroke



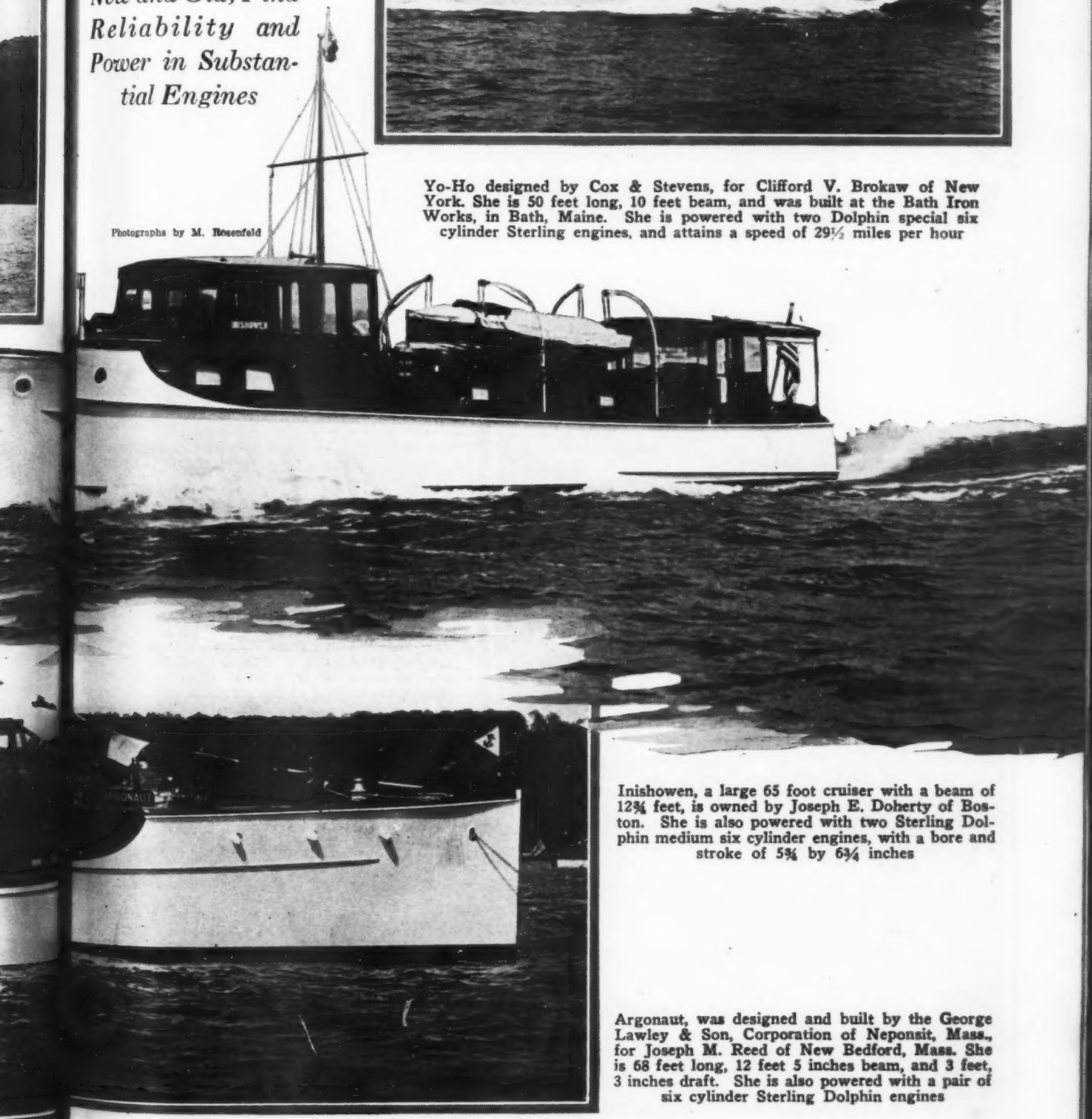
ys Do It

Large Boats, Both New and Old, Find Reliability and Power in Substantial Engines



Yo-Ho designed by Cox & Stevens, for Clifford V. Brokaw of New York. She is 50 feet long, 10 feet beam, and was built at the Bath Iron Works, in Bath, Maine. She is powered with two Dolphin special six cylinder Sterling engines, and attains a speed of 29½ miles per hour

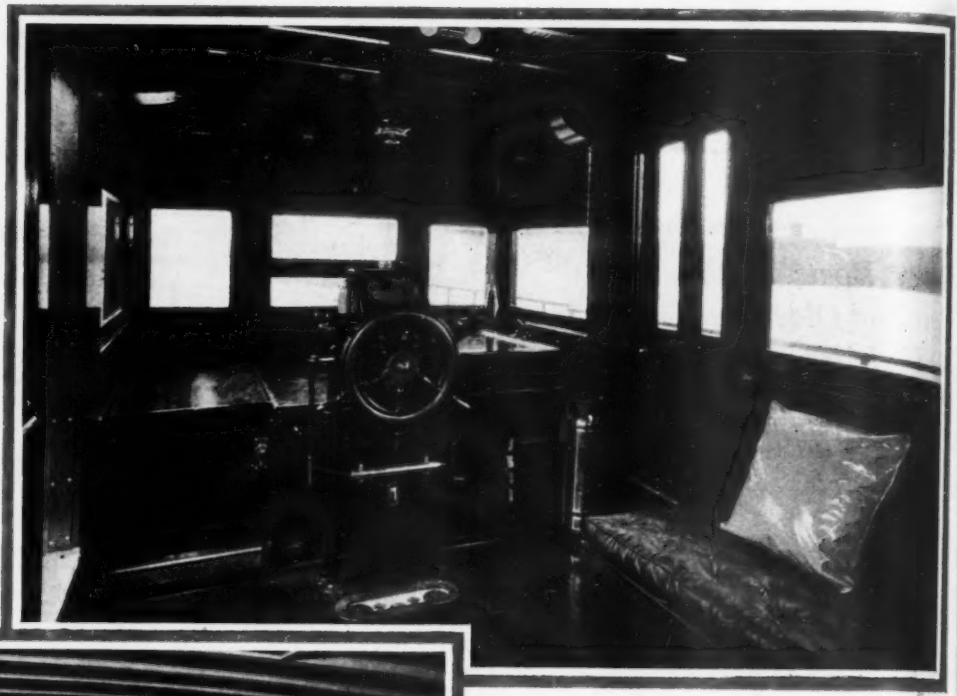
Photographs by M. Rosenfeld



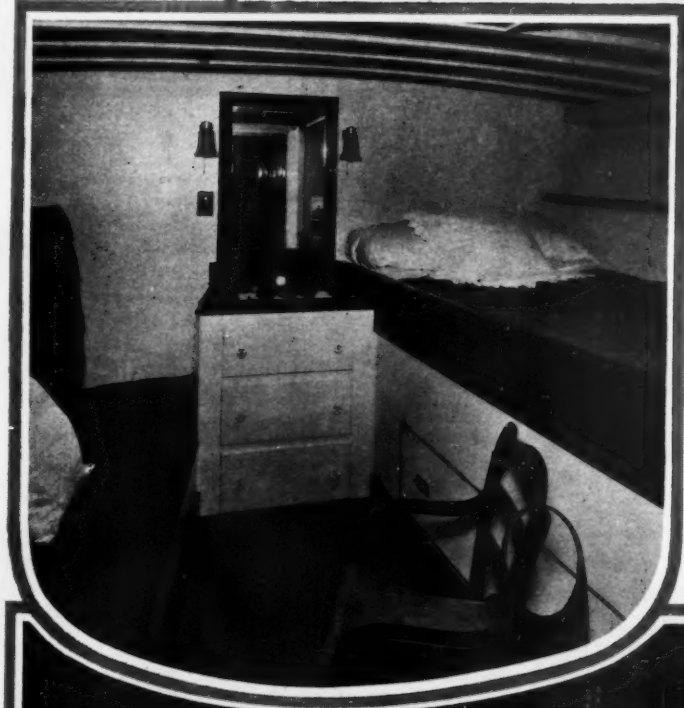
Inishowen, a large 65 foot cruiser with a beam of 12¾ feet, is owned by Joseph E. Doherty of Boston. She is also powered with two Sterling Dolphin medium six cylinder engines, with a bore and stroke of 5¾ by 6¾ inches

Argonaut, was designed and built by the George Lawley & Son, Corporation of Neponsit, Mass., for Joseph M. Reed of New Bedford, Mass. She is 68 feet long, 12 feet 5 inches beam, and 3 feet, 3 inches draft. She is also powered with a pair of six cylinder Sterling Dolphin engines

Photographs by M. Rosenfeld



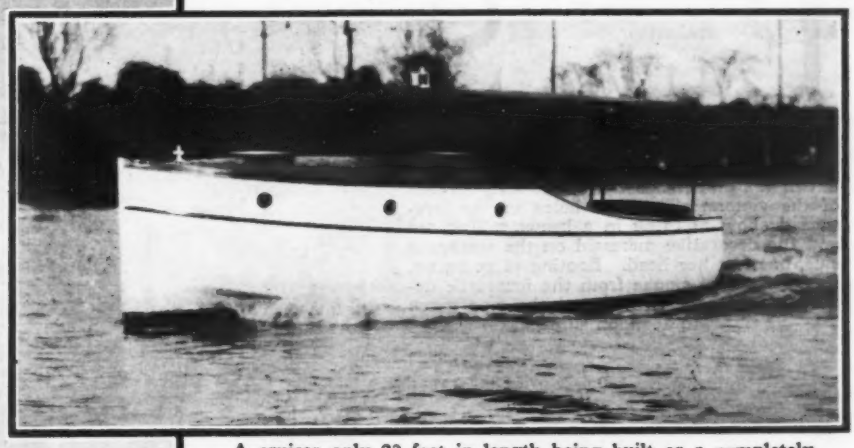
Silvia is a 70 foot cruiser, built for Robert G. Campbell, by the Albany Boat Corporation of Watervliet. The overhanging yacht stern improves the appearance and gives additional deck space



This type of boat appealed particularly to the owner, embodying as it does the characteristics of two distinct types, retaining the speed of the faster cruiser

SILVIA
A Unique 70-Footer

Two Sterling Dolphin, six cylinder engines, developing 175 h.p. each at 1,200 revolutions, are able to drive her at about 18 miles. The performance is remarkable in view of the small bore, 5¾ inches, of the engines



A cruiser only 23 feet in length being built as a completely standardized product by the Richardson Boat Company. The power plant is a four cylinder Gray engine, and the comfort and convenience is equal to that found on much larger boats. The new boat is much improved over the earlier models

A Complete Little Cruiser

One of the smaller sailing craft which are also built by the Richardson Company. This little sloop is only 16 feet long and is intended for a one design class racing. Fifteen of these boats are in use by the Buffalo Yacht Club and five more at the Erie Yacht Club

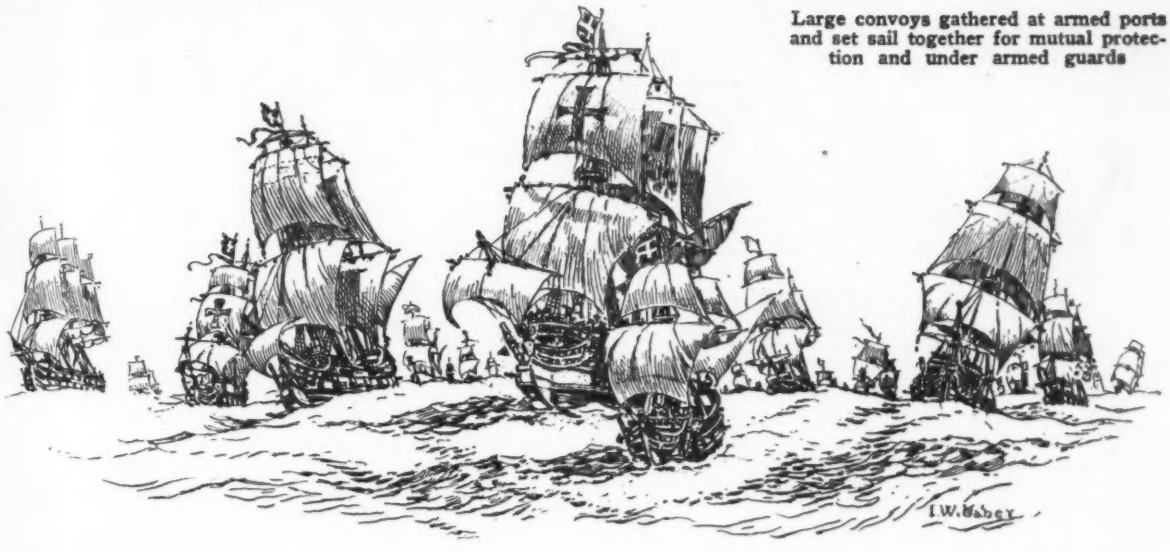
The 34 foot cruiser is a much larger boat and is built as a standardized craft from designs published several years ago in MoToR BoatinG. As built by the Richardson Company the hulls are very substantial with mahogany trim throughout. It is intended to drive the boat with twin screws with a choice of two model V Gray or Kermath 35 h. p. engines

Early Spanish Convoys

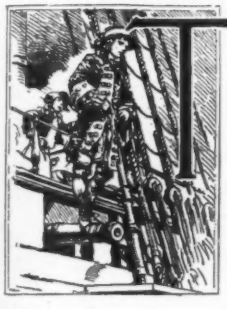
Illustrations and artic

By I. W. Tabe

The Galleon has been boarded and carried by Corsairs after a broadside—and what was left of the crew, shackled to the long sweeps of the victors. The shot holes in the foretopsail show of firing in a heavy rolling sea and the decorative mermaid on the starboard side, has lost her head. Looting is going on, but the curl of smoke from the forecastle denotes she has been fired and the pipe given to abandon ship



Large convoys gathered at armed ports and set sail together for mutual protection and under armed guards



TRADING overseas has been practiced ever since men first discovered the rudiments of navigation and could construct craft seaworthy enough to venture out of sight of land.

The earliest traders were far from being the peaceful merchants of modern times. The very nature of their undertakings made it necessary that they be able to protect their goods as well as navigate.

Hence they were fighters as well as sailors and traders, and if they sighted a fat treasure ship rolling and wallowing in a helpless way, with nothing in sight to incriminate them, they were very apt to pounce on the same and brand themselves pirates.

In early and medieval times, it was a small world compared with the present—as far as sea routes for trading purposes are concerned. The seas from the Baltic to the Euxine became so infested with rovers in the Middle Ages that merchants were compelled to combine together and formulate laws of convoying with the help of their various governments.

These convoys were composed of a conglomeration of vessels of all kinds which gathered together at a set date, in some armed port, and at a given signal sallied forth under armed escorts.

Some of these convoys numbered hundreds of vessels and ran from Mediterranean ports through the gate of Hercules (Gibraltar), and up the Atlantic and Bay of Biscay to England, Holland, etc.

Some were scattered by storm, others were never heard of again. You can read of the Hanseatic League of the north, the East India Co. of England, also of Holland, but by far the most interesting of all were the Spanish Convoys to the New World.

In the middle of the sixteenth century Spain was forced to adopt special armed escorts for her merchant vessels.

For fifty years she had been engaged in a wonderfully developed trade with the new hemisphere, carried on by a great monopoly, the *Casa de Contractacion*, which had become the lifeblood of the realm.

Two convoys or *flotas* sailed annually—one to the West Indies and Yucatan and the other to Peru—and on their return voyage brought rich cargoes of gold, silver, spices and hides, rich food for the piratical cloth.

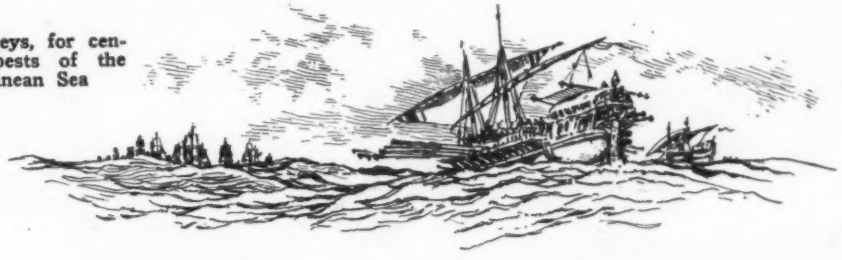
The French Corsairs were especially obnoxious with their swift *fregatas*, under men like Jean Bart, Frouin, and others. The archives of the French Marine prove that in the single year of 1687 four thousand two hundred vessels fell prey to these gentlemen with their letters of marque.

There were others of the same kin. Men like Drake, Hawkins, and other Elizabethian adventurers.

In 1590 Queen Elizabeth of England dispatched an expedition to waylay a treasure convoy on its return voyage to Spain from the West Indies. The Spanish monarch, Philip II, acquiring information of this piratical scheme, sent a fast galleon over with instructions to hold the convoy for further orders; so they remained anchored in a tropical harbor for another year, and as they did not sheath ships' bottoms with copper in those days, worms made them very unseaworthy, so much so that on the return voyage in 1591 nearly a hundred of these ships were lost.

From the Roman Empires, *liburnae*, galleys armed with crossbows, rams and spears, guards of the Mediterranean to Great Britain's huge convoys to the Far East and West Indies, with line of battle ships bristling with cannon, you can find records of great catastrophes, where Neptune took toll of hundreds of ships, of bloody conflicts, fire and shipwreck, and the shackles of slavery.

But rifled guns of heavy calibre and steam power instead of sail at the end of the eighteenth century, swept these convoys of quaint vessels into shadows of the past along with their hunters, the gentlemanly corsair and bloody pirate.



Moorish galleys, for centuries the pests of the Mediterranean Sea

An Original MARINE ENGINE

Four and Eight Cylinder Horizontal Opposed Engines Developed Especially for Marine Work and to Develop 50 and 200 Horse Power

By Julian S. Brown

AN experience of many years has brought to the designer of the new Jule motor a thorough knowledge of the needs of engines, particularly adapted for use in boats, under hard marine conditions. Some of the features which were considered and satisfactorily solved in designing the machine, can be listed as follows: Lack of vibration, long life, light weight per horse power, accessibility, economy, compactness, easy starting, controllability, freedom from continual annoying adjustments, fire hazards, entirely new type of reverse gear, and better material and workmanship. These headings can be elaborated upon to any desired length, but a brief comment on each will serve every purpose.

Since the opposed type was the only type of four cylinder motor that was inherently balanced, the Jule Motor Corporation of Syracuse decided to adopt this construction for both the four and eight cylinder machines. An observation of one of these engines in operation will show that vibration has been eliminated, and the machines are freer from vibration than other engines, regardless of number of cylinders or size.

Long life in any mechanism can be obtained by adequate bearing surfaces and proper lubrication. The bearing areas in these machines are considerably larger than in any other motor of the same size now built. Full pressure lubrication is provided to practically every moving part and the reverse gear. This can be considered to be standard practice on all engines today.

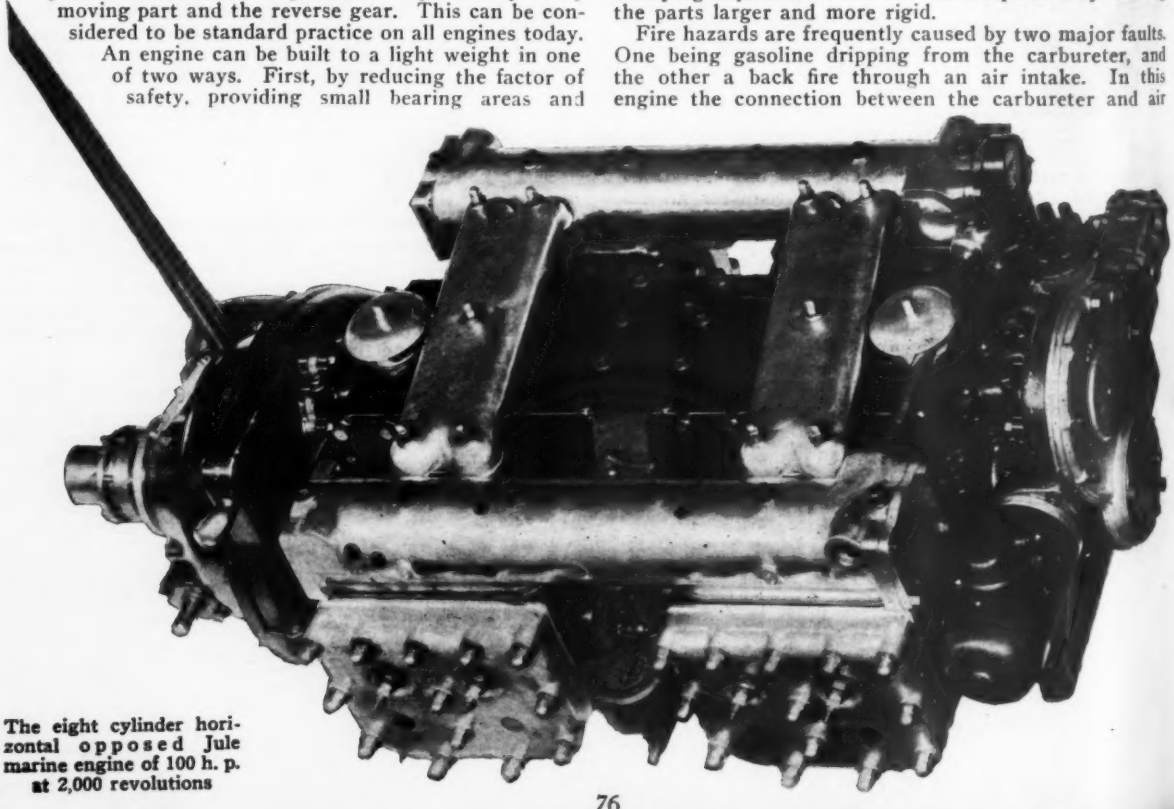
An engine can be built to a light weight in one of two ways. First, by reducing the factor of safety, providing small bearing areas and skimp on the construction. The other method, used in the Jule engine is to so design the motor as to eliminate many parts, and combine the functions of many others.

Service on engines is also an important consideration, since boats are usually located at great distances from help. Accessibility has been carried to an extreme point in these engines, so that it will seldom be necessary to call for expert assistance in servicing the engines. Fuel is saved through the use of a very high compression type engine, with a cylinder head so designed as to eliminate pinging, with any standard fuel.

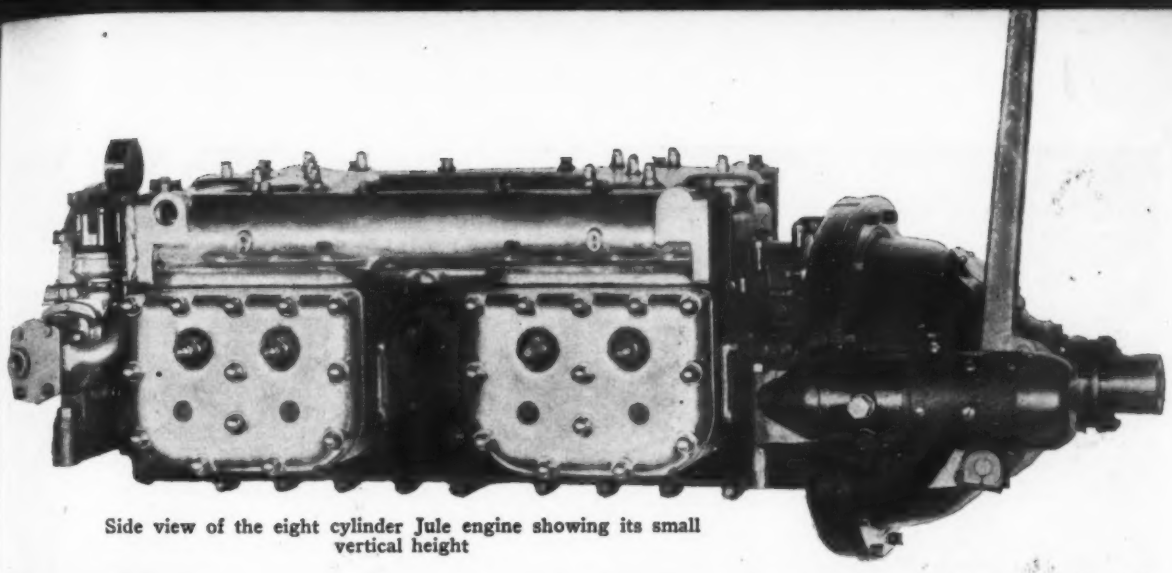
Compactness is accomplished by the use of an opposed type of engine, which makes a shorter and lower type than the conventional. These engines are from ten to twenty-four inches shorter, and from eleven to twenty-five inches lower than usual. This is important in both cruisers, and runabouts, as it permits the floor to be built lower down in the hull; in fact, a runabout type of hull can be built in which the two small cockpits can be combined into one, with just a slight rise in the floor over the engine.

Easy starting and control is merely a matter of proper lubrication, and manifolding. An entirely new plan of manifolding makes the control of this motor better than any other yet manufactured. Freedom from continual annoying adjustments has been accomplished by making the parts larger and more rigid.

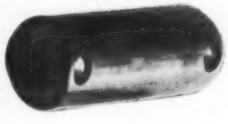
Fire hazards are frequently caused by two major faults. One being gasoline dripping from the carbureter, and the other a back fire through an air intake. In this engine the connection between the carbureter and air

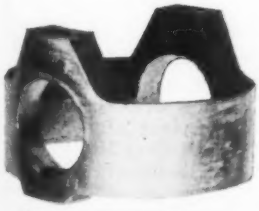


The eight cylinder horizontal opposed Jule marine engine of 100 h. p. at 2,000 revolutions



Side view of the eight cylinder Jule engine showing its small vertical height





A new type of cast iron piston with which an aluminum wrist pin retainer is used

intake has been leak-proofed and it has been pointed upward and covered with a fine mesh screen. This makes it as nearly fireproof as is possible.

Some reverse gears in the past were the source of occasional annoyance and trouble, more so than any other part of the power plant. Difficulties in adjustments have caused a dragging, and great difficulty in locating a neutral point in the mechanism. The reverse gear in the Jule engine has been so designed as to eliminate all adjustments, all the wear being taken up automatically. With the construction used, there is a positive neutral when the control lever is in the neutral notch, and as there are no adjustments, this position never changes. Since this gear requires no forward pressure to the lever, it can be operated by cable for distant control, where necessary.

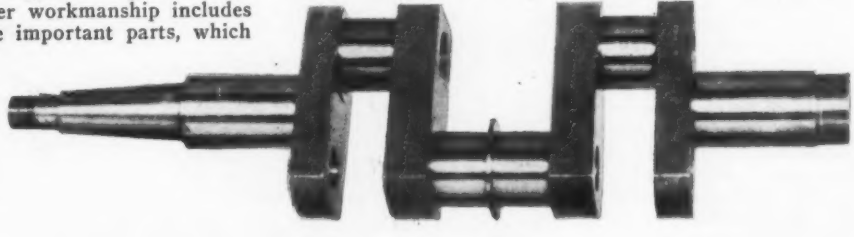
The selection of the materials has been carefully made to provide the most suitable for the particular duty which the piece will be called upon to perform. Better workmanship includes a greater concentration on the important parts, which have a particular bearing on the performance and length of life of the engine.

The engines are built in two general sizes, the smaller of which is a four cylinder unit, of 50 h. p., while the larger is a similar eight cylinder machine, of 100 h. p., both turning at 2,000 revolutions. The weights of the four and eight cylinder engines are 590 and 846 pounds respectively. Cylinder displacements in the two sizes being 213, and 426 cubic inches, which is obtained on a bore of 4 inches, and a stroke of 4¼ inches. The main bearings are all 2½ inches in diameter and 4 inches in length.

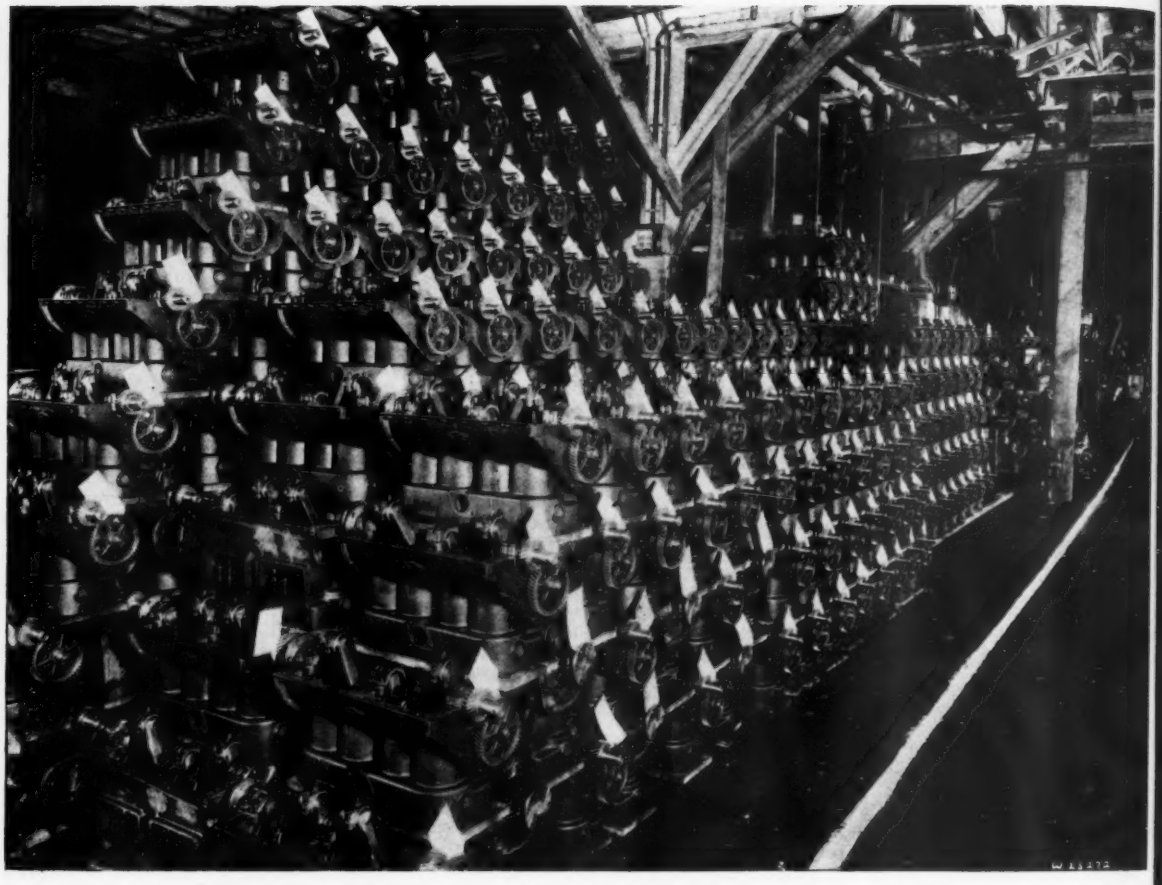
The piston is an entirely new type of cast iron with aluminum wrist pin retainer. The three piston rings are located in the middle of the piston instead of the top as is the customary practice. This reduces their temperature to a point that makes them easily lubricated, consequently, their wear, and the wear on the cylinders are much less than ordinary. Also the leakage is less, as they can be fitted closer, due to the fact that no allowance is necessary for expansion, due to the cooler location. The head is conical and is oil cooled by a continuous stream of oil under pressure, directed against the underside of the head. This construction is also very much lighter than standard practice. Aluminum pistons are not advocated on standard engines, although they will help an engine intended particularly for racing purposes.

Many persons not mechanically inclined seem to have an erroneous impression that cylinders lying on their side will wear out faster than would otherwise be the case. Since pistons have to be designed to withstand a side thrust of several hundred pounds, due to the angularity of the connecting rod on the power stroke, the mere addition of two pounds, the weight of the piston, will have no appreciable effect on the case. In fact, almost all bearing surfaces on the entire conventional motor, such as the crank shafts, and cam shafts, are all lying on their sides, and their weights all exceed by a great deal the weight of a single piston.

Due almost entirely to the difficulties experienced by the designer of this machine, in the design and construction of a gasoline motor boat, this machine has been brought about. While it is true that there are at the present time large numbers of old aviation engines and converted automobile and truck motors finding their way into marine service, it is equally true that these engines are not built for hard marine service, and will not stand up for any length of time under these conditions. The Jule engine described has been developed from the ground up, particularly for the conditions existing in small boats, and these engines should make an ideal power plant for any and all types of boats.



The crankshaft for the four cylinder engine is just about 24 inches long



Photographs of Model Z Gray engines in finished and partially finished condition

Real Production on *Marine Engines*

The Gray Marine Engine Company Turning Out Numbers of Engines

WHEN a marine engine manufacturer reaches the point where he cannot turn out engines fast enough to meet the demand, it surely indicates prosperity. The Gray Marine Engine Company of Detroit are in this agreeable condition. Our illustrations show some 385 finished and unfinished Model 2 engines en route through the shops. With another 200 odd not visible in the pictures, there were on this day in the plant, some 600 engines of this one model alone.

This particular engine is the one which has been selected by both the Elco Works and the Richardson Boat Company as the most suitable for their new standardized cruisers. These are to come through the plant later.

The Model Z final assembly line, all accessories are fitted and engines prepared for tests

All Gray Marine engines are assembled on a regular assembly line following most modern practice. After the block has been assembled the partial engine takes its place in the line, and carburetors, plugs, wires, pumps, generators, starters, and similar details are fitted and inspected. From here they pass on to a test room where they are first eased in by running with a belt and then under their own power. The total testing for each engine including checking and inspecting requires that they be running on the test stand for approximately nine hours after starting the test.

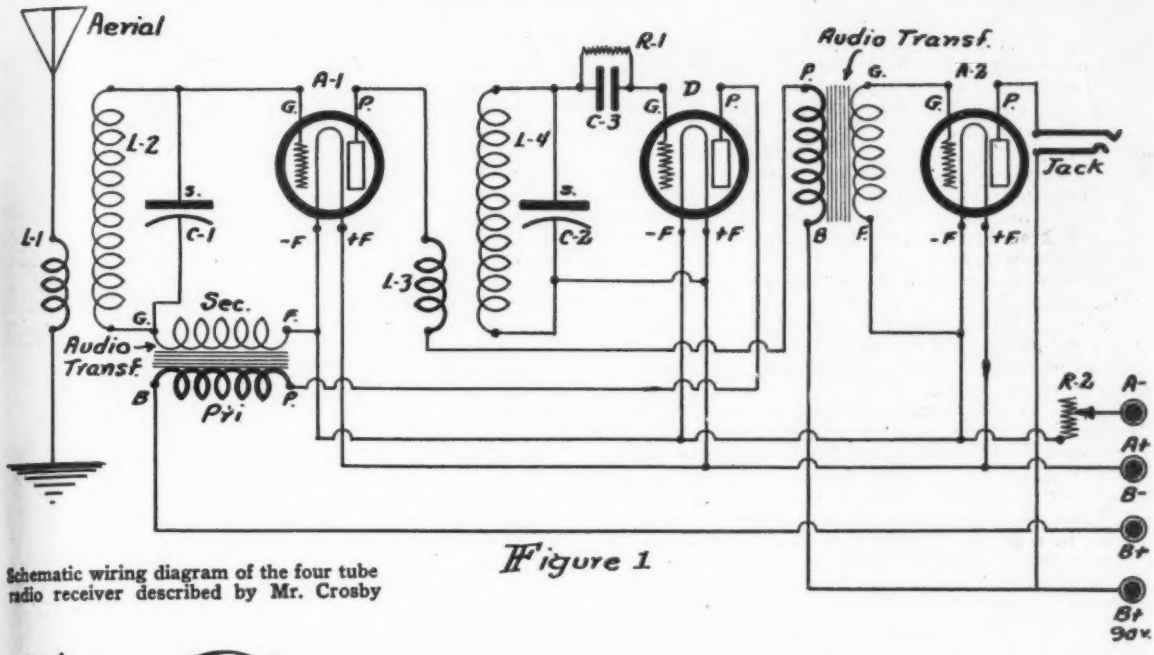


Figure 1

Schematic wiring diagram of the four tube radio receiver described by Mr. Crosby

A Compact RADIO

For the Cruiser

Data on Building a Small Three Tube Set Which May Be Tucked Away in Almost Any Corner. Gives Four Tube Efficiency

By W. F. Crosby

THERE is no reason under the sun why a radio set cannot be made an integral part of the boat's equipment. It will relieve the monotony and will bring joy on quiet evenings spent in a snug anchorage and will effectually counteract the crew's itch for shore-leave.

The possibilities for successful radio reception are mighty good even on the smallest of cruisers for there are now so many broadcasting stations that it is almost impossible to be out of touch with them all, even though the hot weather may cut down on the receiving range of the set. The greatly exaggerated static bogy is hardly worth consideration unless there is a thunder storm in the immediate vicinity and it is an actual fact that there are many nights, even in the middle of the summer, when radio is as clear as in the cold months. About the only thing which is effected is the range of the set, but after all, one good program is worth a dozen hazy, indistinct performances from distant stations and most people who have radio sets at the present time prefer these near-by programs.

Illustrating the method of mounting the several parts on the panels of the three tube receiving set

As we have pointed out before in these columns a successful marine radio set must have several attributes not usually found in commercially made receivers. These include, extreme compactness, weather proof construction, flexible wiring and ease of tuning. Each point is equally important if we are to expect a set which will continue to work under almost all conditions.

There is, of course, such a thing as carrying the compactness to such a point that the set will be ineffective and the writer well remembers a tiny receiver that he once designed for a camp-

ing trip. This was a two tube affair with a bakelite panel only four inches high and eight inches wide. It had all the makings of a big set but every part had been boiled down and crowded up until there was hardly room for another wire inside of the small cabinet. The set looked very pretty and made a nice picture, but as far as working was concerned, it was almost a total failure, for it was so jammed up that transformers and inductances were inductively coupled and the losses were so high that it could just about be counted upon to receive stations within twenty-five miles if a head-set were used.

The set that we are about to take up now, though, is a different matter. This panel is twelve inches long and seven inches in height with an overall depth on the inside of the cabinet of six inches. It is designed for both compactness and workability, and on its trial trip it lived up to all expectations.

In order to get the most volume from a given number of tubes it has been found necessary to use the principle of reflex in which one tube is made to do the work of two, but without shortening its life in any way. While there are three tubes in this set, it actually has efficiency equal to about four tubes for the first one is used over twice. In order to make the set as efficient as possible, ordinary storage battery tubes are used for most boats are equipped with such batteries and they may easily be used for the purpose. Dry cell tubes may, of course, be used if desired, but bear in mind that they will not deliver the volume that the others will give. Of course, for a very small boat, where there is no storage battery, dry cell tubes must be used, but they are not recommended.

In Figure 1 we have the schematic wiring diagram of this small receiver. There are three tubes and two tuning controls which when all added together, according to the circuit, give us one stage of tuned radio frequency amplification, a tube detector and two stages of audio frequency amplification, a combination which ought to be able to work a loud speaker with fairly good volume. Of course, a regulation aerial and ground must be used but the aerial does not have to be extremely long. Just use a single piece of copper wire, getting it as long and as high as you can for the boat. The ground may be made to the engine frame, to the metal rudder or better yet to a copper plate secured to the outside of the hull below the water-line.

Fig. 3

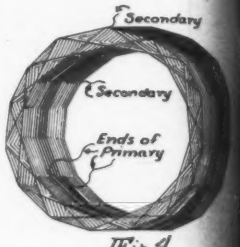


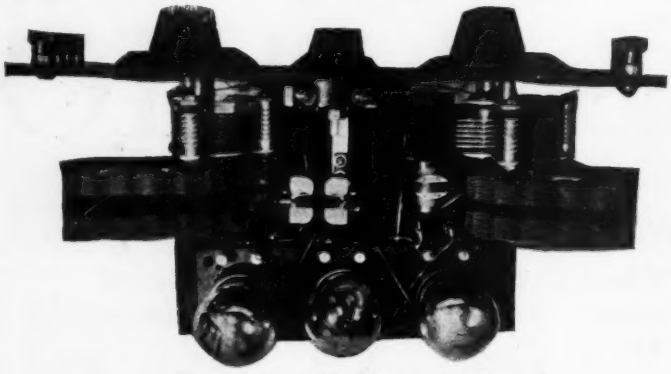
Fig. 4

Showing the form for winding the inductances and a finished coil

Now for the circuit itself. Both Figure 1 and Figure 2 bear markings which correspond with each other and by working back and forth from one to the other you should have no difficulty. Assuming that the panel is laid out according to Figure 2, which is a scale drawing, and that you have the base-board secured to the bottom of the panel, the next step is to mount the parts and wire them up.

A three gang tube socket is used across the back of this base-board with the two audio

(*Continued on page 368*)



Top of the set showing the relation of the parts

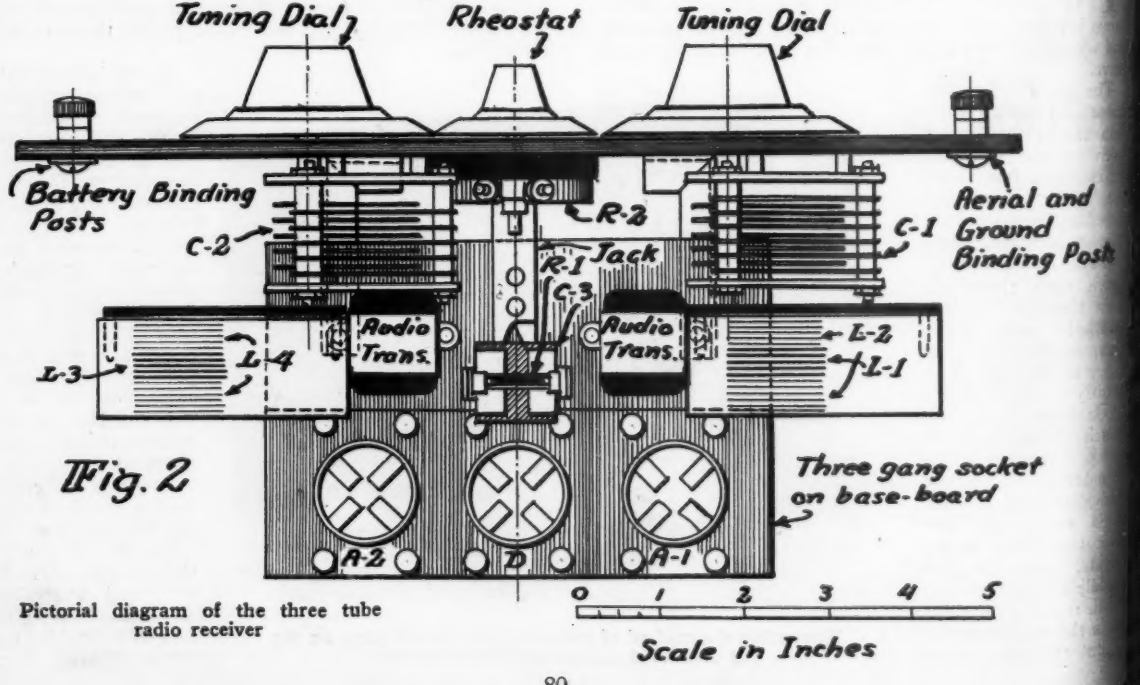


Fig. 2

Pictorial diagram of the three tube radio receiver

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Fig. 3

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MOTOR BOATING'S

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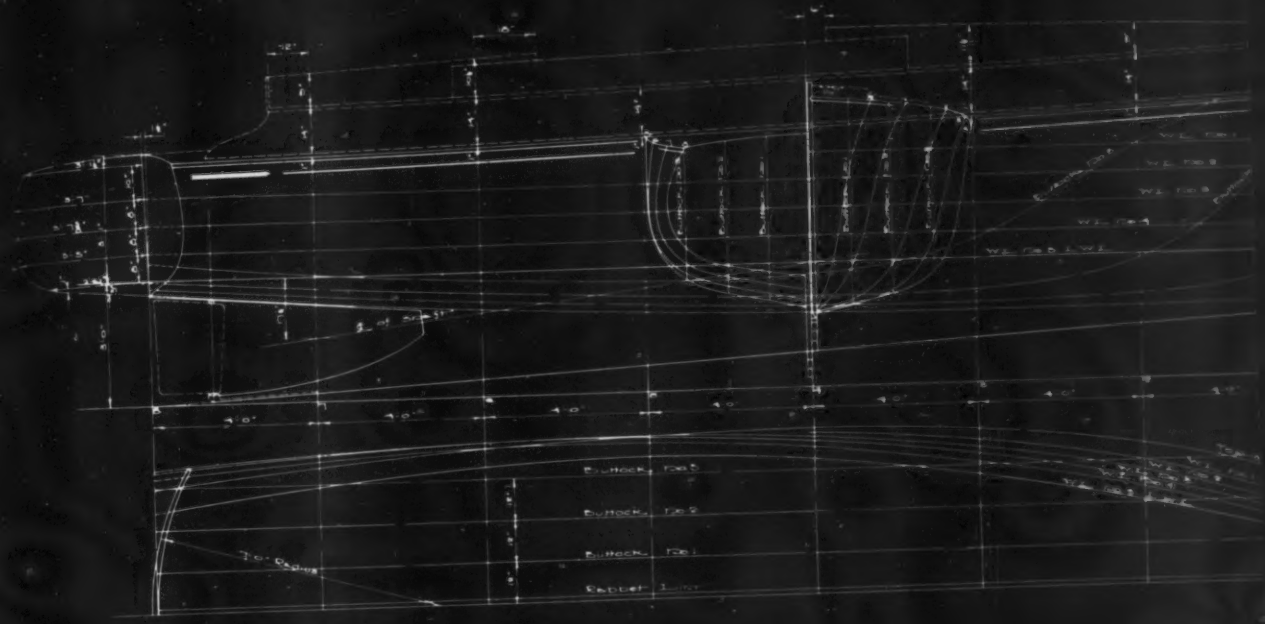
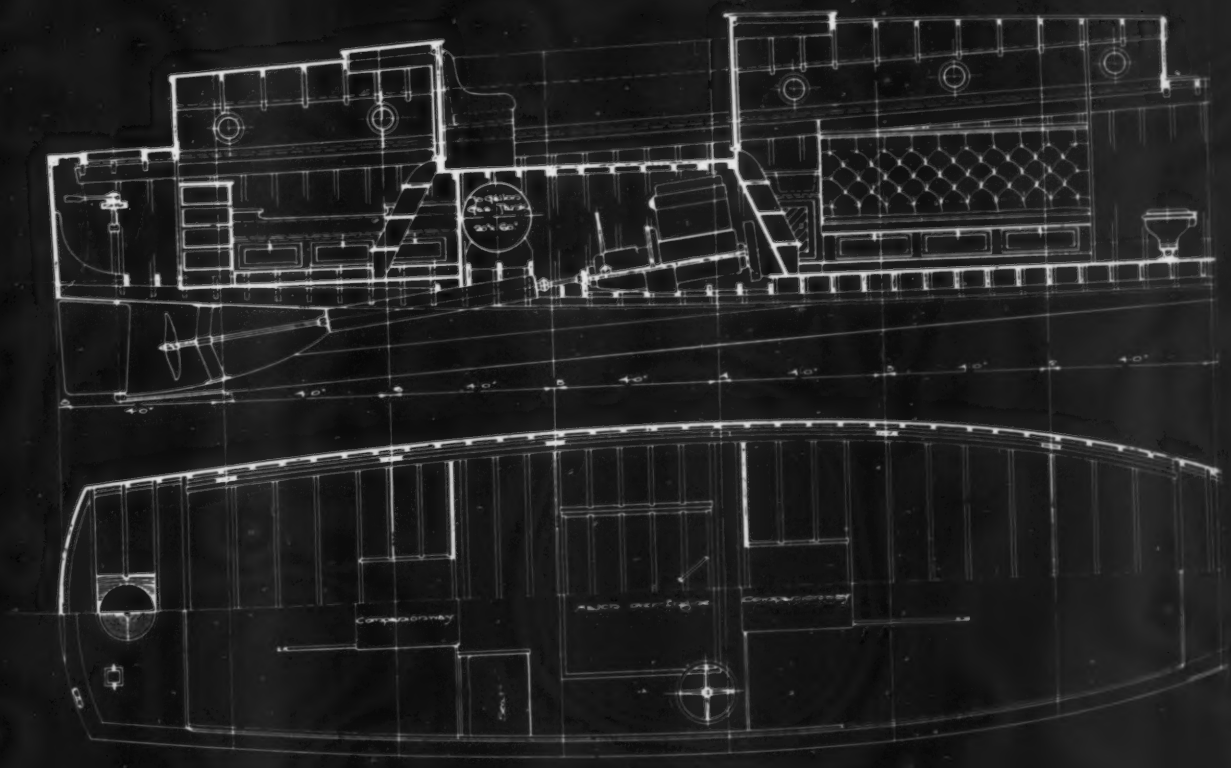




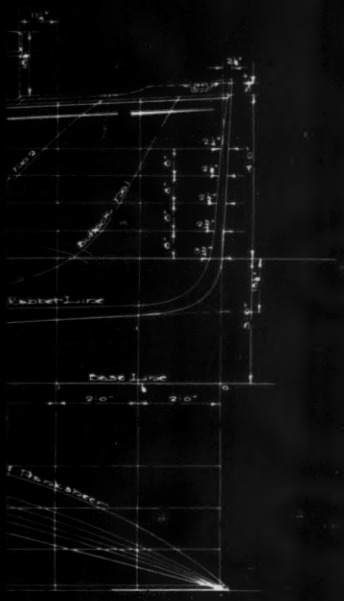
BUILD A BOAT

CONTEN

A

Double Ca

Cruiser



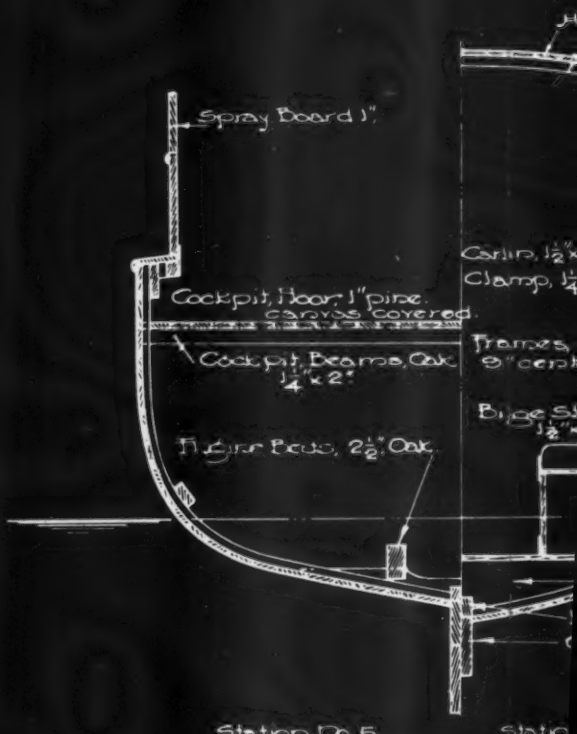
Designed by

CHAS. D. MOWE

Especially for

MOTOR BOATING

119 WEST 40th ST.
NEW YORK N. Y.



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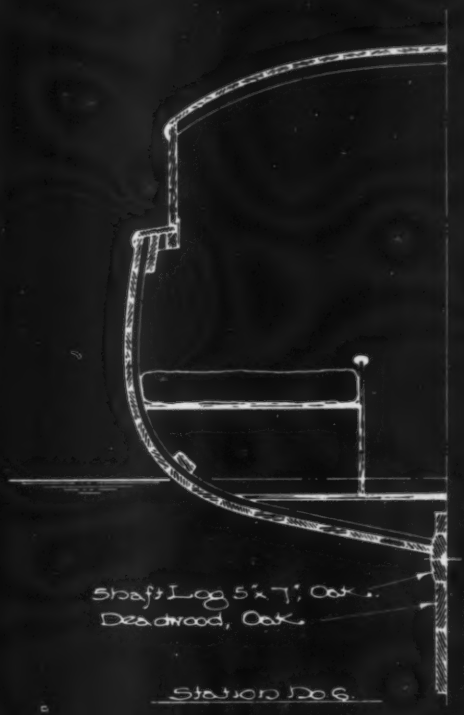
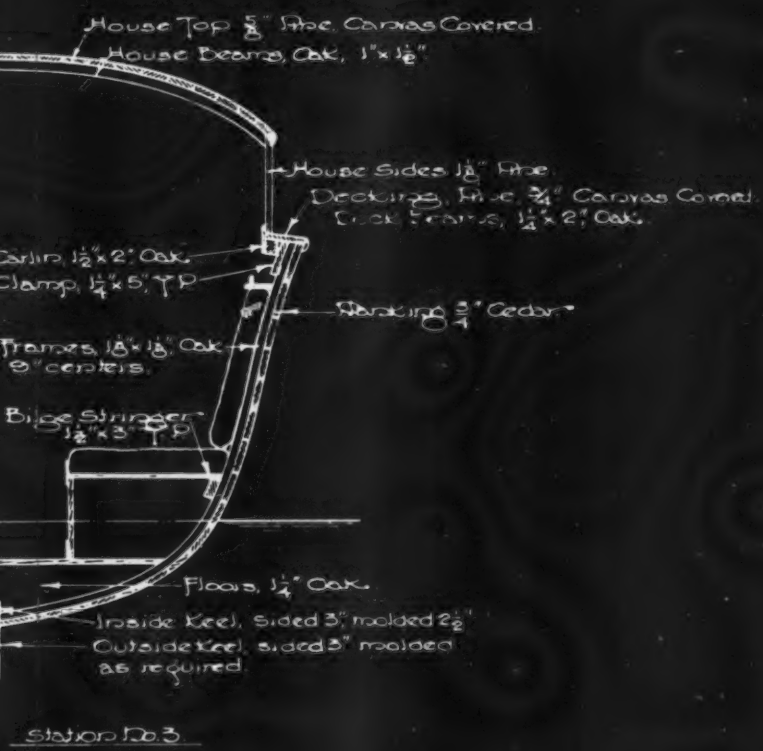


Station No 6

Scale ½" = 1'



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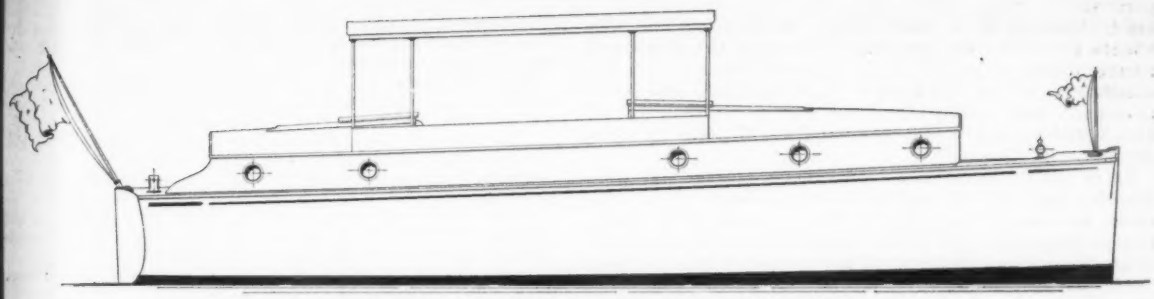


Outboard profile of the 32 foot double cabin cruiser Content

CONTENT, *A 32-Foot* Double Cabin Cruiser

An Excellent Craft for Comfortable Cruising Arranged with Double Cabins and Large Bridge Deck Space

Designed Especially for MoToR BoatinG

By Charles D. Mower

AMONG the many suggestions for designs already received from the readers of MoToR BoatinG there have been several requests for a design of a good wholesome boat of the round bilge type, about thirty-two feet over all, with a double cabin arrangement, capable of a speed of about ten miles per hour with a heavy duty engine of moderate horse power and a type of hull suitable for cruising anywhere from the Maine Coast to the inland waters of the South.

The Portland Yacht Yard has developed a thirty-two foot, double cabin, V bottom cruiser with a speed of about twenty miles per hour which has proven very satisfactory and in the design given in this issue of MoToR BoatinG the designer has frankly borrowed the general lay out plan of the Portland Yacht Yard boat and adapted it to a round bilge hull of easy lines which can be driven up to a speed of twelve miles per hour with less power than would be necessary for the same speed with a V bottom hull. The round bilge boat has the additional advantage of being both easier and less expensive to build than a V bottom hull if proper construction is provided at the bilge chine.

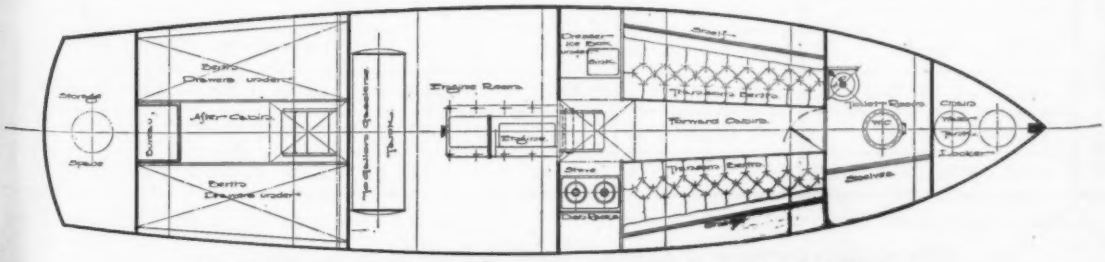
The double cabin arrangement works out surprisingly well for a thirty-two-foot boat and gives a forward cabin with full headroom for a person of average height, with toilet room and galley space conveniently arranged. The after cabin is intended primarily for use as a stateroom and has two fine berths and a convenient bureau. The headroom here has been sacrificed for appearance's sake and is reduced to five feet which gives sitting up headroom over the berths. This arrangement allows two couples to cruise with a reasonable degree of privacy and it is usually the case that a cruising party is made up of four persons so that a double cabin boat is most desirable. In the many cases where the boat is used only by the owner and his wife the double cabin arrangement is most desirable as it separates the living and sleeping cabins and allows keeping the berths made up and ready for occupancy and avoids the necessity of turning the cabin topsy-turvey to make up the berths when it comes time to turn in.

The bridge deck, or cockpit, is nearly seven feet long and eight feet wide which gives ample deck space for day cruising and room for camp cots at night if extra sleeping accommodations are necessary. The engine is entirely under the cockpit floor and is made accessible by flush hatches in the deck which, when raised, give ample room to get at the engine for adjustments and repairs.

A seventy gallon gasoline tank is provided which should give a cruising radius on one filling of the tank of very close to three hundred and fifty miles as the boat should cruise at ten miles per hour on two gallons of gasoline, or five miles per gallon of gasoline.

A boat of this size and type offers almost unlimited opportunities for cruising as she is small enough to be easily handled by one man and while her draft of only three feet allows her to travel the inland waterways, she has the seagoing ability to make long outside runs and to cruise in open waters without fear of bad weather.

As this boat is rather more of a proposition than the average amateur will care to tackle, the plans and specifications are given in the form in which they are ordin-



Arrangement plan of the 32-foot cruiser designed by Charles D. Mower

arily furnished to a boat builder so that anyone who wishes to build from the design can take the plans and specifications, as published, to his boat builder with the assurance that he will have a better designed boat than is usually the result when the builder is told to go ahead without a carefully prepared set of plans to work from.

It is not unlikely that some wide awake and progressive builder will realize the possibilities the design offers as a stock boat proposition as most of the stock boats of this size are of the single cabin type and there is an unquestionable demand for a double cabin, bridge deck boat of this size. As the designs given by MoToR BoatinG are for the benefit of the trade as well as the individual boat owner, the designer places no restrictions whatever on the use of the designs by either amateur or professional builder; and the aim of MoToR BoatinG is to help both owner and builder in the creation of better boats.

Blue prints to a scale of ¾ of an inch to the foot, of the designer's drawings are available. If interested write the Editor, MoToR BoatinG, 119 West 40th Street, New York, N. Y.

Dimensions:—Length over all, 32 feet 4 inches; length water line, 32 feet 0 inches; breadth, extreme, 8 feet 0 inches; draft, extreme, 3 feet 0 inches.

Material and Workmanship:—In carrying out these specifications, it is understood that only the best materials shall be used and the best workmen employed.

All woods shall be sound, well seasoned, and of a kind and quality suitable for the use intended.

Any defective material or workmanship will be rejected at whatever stage of the construction it may be discovered and shall be made good by the Boat Builder at his expense to the complete satisfaction of the Owner.

Keel:—To be of clear white oak in one length, sided 3 inches, moulded 9 inches at after end, forward end moulded to inside of planking as shown on plans.

An inside keel, of white oak, sided 3 inches and moulded 2½ inches fitted to inside of keel and deadwood from inboard end of shaft log to stem knee as shown on plans.

Stem:—To be of clear white oak, sided 3 inches and moulded as shown on plans. Stem knee to be of white oak, sided 3 inches, scarfed to keel and to stem and thoroughly bolted with ⅜ inch galvanized rod headed over clinch rings.

Stem to be rabbeted to take planking. Outside of stem to finish fair with plank.

Face of stem to be fitted with a galvanized stem band.

Shaft Log and Deadwood:—Shaft log to be of white oak, sided 5 inches and moulded 7 inches, made of two pieces fitted together with a white pine tongue set in a groove in each piece of shaft log to make a water tight joint and thoroughly bolted together.

Upper and lower edges of shaft log to be reduced to a siding of 3 inches to fit siding of deadwood and stern timber.

Deadwood, or filling piece between top of keel and under side of shaft log, to be of white oak, sided 3 inches and moulded as shown on plans.

Stern Timber:—To be of white oak, sided 3 inches and moulded as shown on plans. To be rabbeted to take planking and morticed to receive heels of frames.

To be securely drift bolted to shaft log with ⅜ inch galvanized iron rods headed over clinch rings.

Stern Transom:—To be of 1 inch white oak steam bent to radius of 7 feet 0 inches as shown on lines.

To be fitted with an oak frame 1 inch by 3 inches around edge to take ends of planking and with oak stiffener cleats ⅞ by 3 inches spaced 12 inches apart on inside face.

To be fastened to stern timber with an oak, or hackmatack knee, sided 3 inches, as shown on plans.

Frames:—To be selected white oak, 1⅛ by 1⅛ inches spaced 9 inches center to center, steam bent to shape.

Heels of frames to be fitted into mortices in keel, deadwood and stern timber and fastened with a galvanized boat nail in each frame.

Bow frames to be twisted in bending to fit inside of planking, or properly bevelled after being bent.

Floors:—An oak floor 1¼ inch thick to be fitted to each pair of frames. Floors to be moulded to proper depth over keel to take cabin floor in forward part of boat.

Floors are to be fastened to heels of frames with 5/16 inch galvanized screw bolts set up with nut and washer and drift bolted to keel with ⅜ inch galvanized iron drift bolts.

Floors are to be fitted to inside of planking and planking is to be fastened to both frames and floors.

Engine Beds:—To be of white oak, sided 2½ inches and moulded to proper height to suit shaft line and engine bed plate.

Bed pieces are to be notched down over floor frames and to be through bolted.

Bilge Stringers:—To be of yellow pine, 1½ by 3 inch, tapered at ends to 1 by 2 inch.

To be fastened to inside of frames with one ¼ inch screw bolt at each frame.

Clamp:—To be yellow pine 1¼ by 5 inches, fitted so as to be flush with under side of deck and fastened to frames with ¼ inch galvanized screw bolts.

Planking:—To be of white cedar, ¾ inch thick when finished, worked in narrow strakes and as long lengths as possible. All butts to be made on an oak block fitted between frames and shall be well shifted. Not more than two butts in any strake.

Planking to be hollowed on inside to fit shape of frames and rounded on outside so that no flat spots show after final smoothing up.

Planking to be fastened to frames with 1¼ inch No. [illegible] brass screws, carefully bored for and countersunk. Heads covered with cedar bungs set in shellac or thick white lead paint.

(If preferred by Builder, and approved by Owner, either copper nails riveted over burrs or galvanized boat nails may be used for the plank fastenings but the brass screw fastenings are recommended by the Architect.)

(*Continued on page* 148)

	Stations.	½	1.	2.	3.	4.	5.	6.	7.	8.
Heights above Base.	Top of Sheer	6-10-3	6-9-2	6-7-1	6-4-7	6-3-0	6-1-3	6-0-0	5-10-6	5-10-0
	Buttock No. 3.			5-8-4	3-5-7	2-8-4	2-7-6	2-9-4	3-0-4	3-5-0
	Buttock No. 2.		5-11-3	2-11-0	2-2-7	2-2-0	2-3-4	2-5-6	2-8-2	2-11-4
	Buttock No. 1.	5-2-5	2-9-4	2-0-5	1-11-2	1-11-2	2-1-0	2-3-2	2-6-1	2-9-4
	Rabbet Line.	1-10-2	1-9-6	1-9-1	1-9-0	1-9-3	1-10-6	2-1-0	2-4-0	2-7-3
Half-Breadths.	Top of Sheer	1-6-6	2-5-1	3-5-1	3-10-4	4-0-0	3-11-2	3-8-7	3-4-7	2-11-5
	W.L. No. 1.	1-1-2	1-10-6	2-11-6	3-7-2	3-10-4				
	W.L. No. 2.	0-11-4	1-8-2	2-9-2	3-5-1	3-9-4	3-11-2	3-10-6	3-8-1	3-4-4
	W.L. No. 3.	0-10-0	1-6-0	2-6-6	3-3-3	3-8-1	3-10-5	3-10-6	3-8-4	3-5-2
	W.L. No. 4.	0-8-6	1-4-0	2-4-2	3-0-5	3-6-3	3-9-2	3-9-1	3-6-4	3-2-2
	W.L. No. 5. L.W.L.	0-6-7	1-1-0	2-0-4	2-9-1	3-2-7	3-5-0	3-3-4	2-11-3	2-4-7

Dimensions in feet, inches and eighths to outside of Planking

Table of offsets containing all necessary dimensions for building the 32-foot cruiser Content

MOTOR BOATING'S BU

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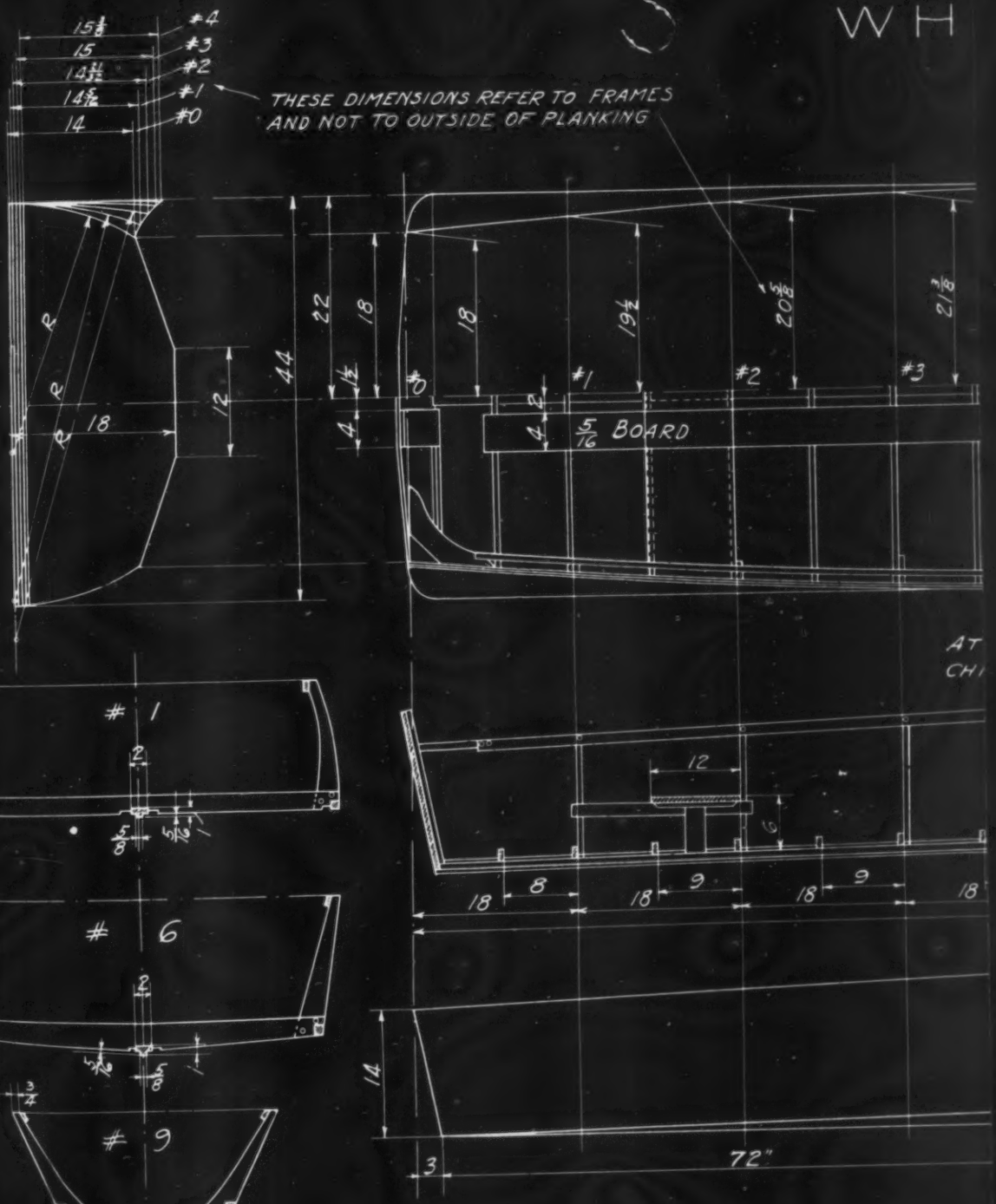
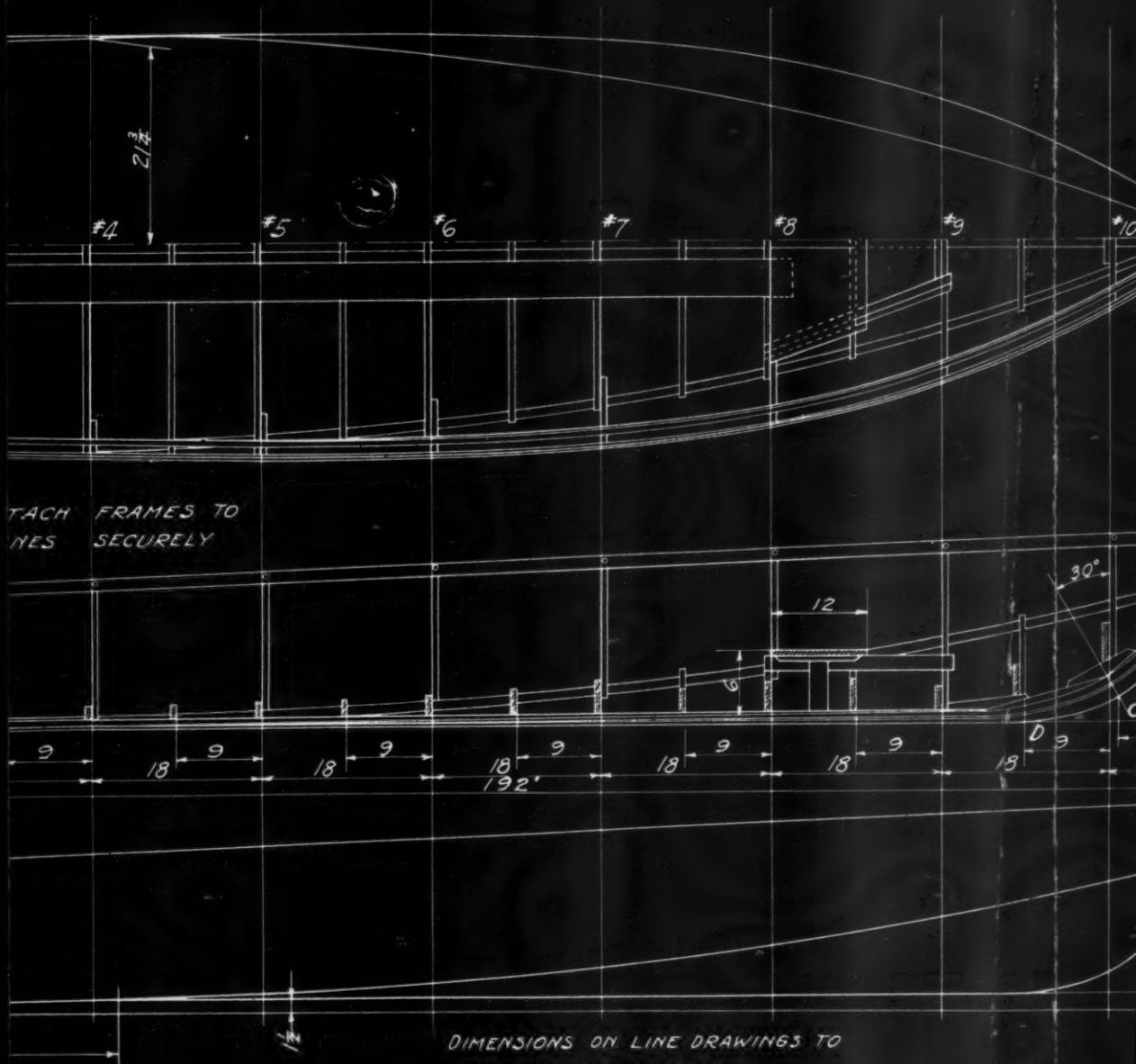


ILD A BOAT Series

Z - A 16 Foot Outboard Engined



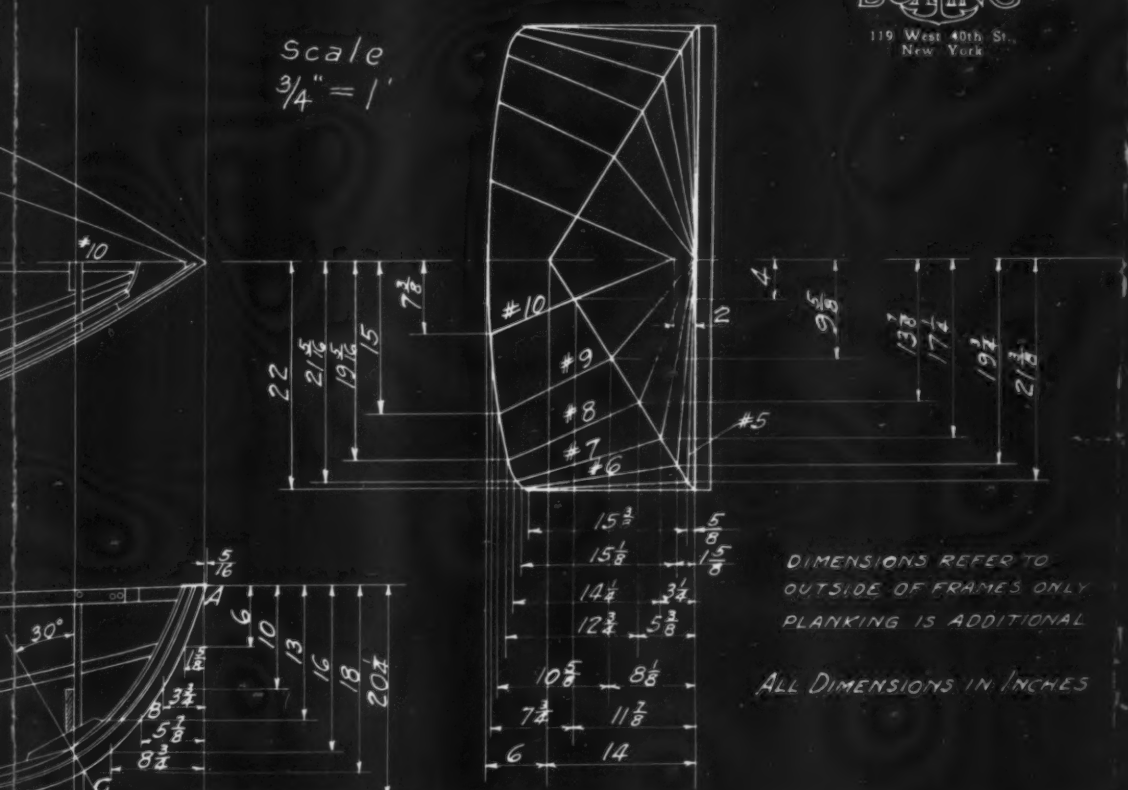
ned Speedster

Designed by
CHAS. D. MOWER
Especially for

MOTOR BOATING

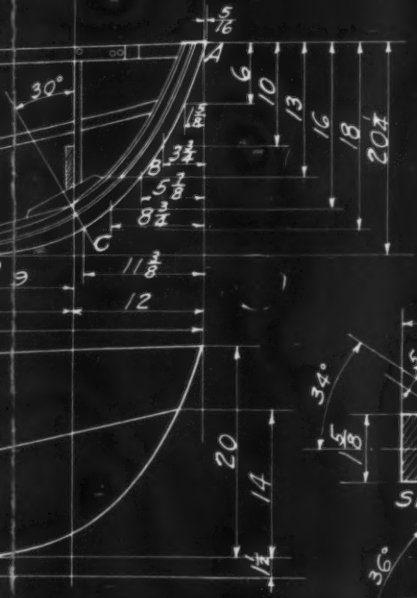
119 West 40th St.,
New York

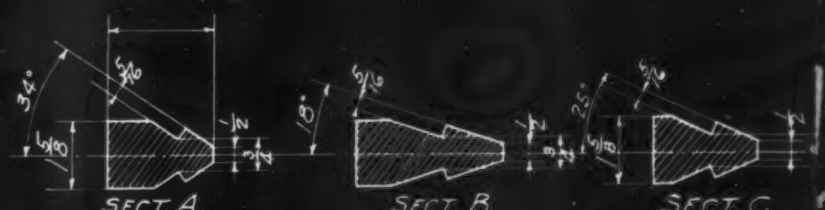
Scale
3/4" = 1'



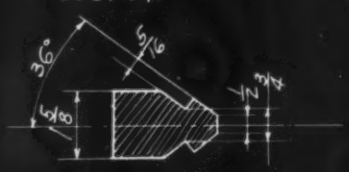
DIMENSIONS REFER TO OUTSIDE OF FRAMES ONLY
PLANKING IS ADDITIONAL

ALL DIMENSIONS IN INCHES





SECT. A. SECT. B. SECT. C.



SECT. D.

STEM DETAILS

Boat built to this design and being driven at 16 m.p.h. by the new 6 h.p. Johnson engine

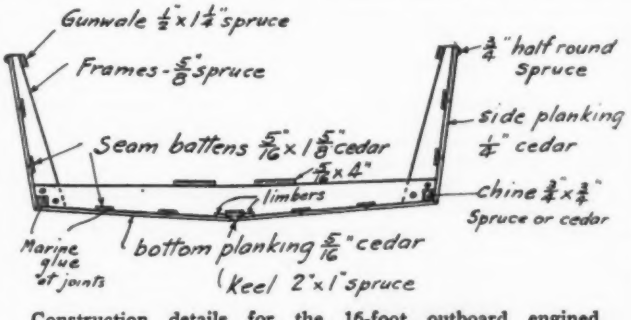
WHIZ
An Outboard Speedster

A Design for an Exceptionally Fast Boat Designed to Be Driven by the New Six Horse Power Johnson Outboard Engine

FOR the particular benefit of the speed bug, who must have speed under any consideration, this design for a fast little boat, has been prepared by the engineering department of the Johnson Motor Company. Intended to be propelled by one of the new and exceptionally powerful six horse power, outboard engines, such as that used experimentally last summer by the Johnson Outboard Motor Company, this boat will produce startling results in the way of speed. Similar boats to this were successful last summer in winning many of the competitions, and speeds of 16 m.p.h. were every day events.

This little boat follows in general the hydroplane type of design and construction, and in building it, care should be exercised to keep all excess weight down to a minimum point. This boat is sailing under its own colors, as a fast craft, particularly adapted to racing. It is not intended to be a family row boat, to take all hands, the children and the dogs out for a day's outing, as it is too narrow to be a suitable boat for these conditions. When used with one of the big engines, and loaded with not more than two passengers, the results will surprise you.

The drawings for this boat, which have been reproduced, show the dimensions for each of the ten frames, carefully drawn on the print. It must be remembered that these figures read to the outside of the frame, and that the thickness of the planking, which will be added to these dimensions, will make the size of the boat greater than the figures given, by the thicknesses of the planking on the sides and bottom. It will be noted that there is a drop of 1½ inches in the keel member from a point near station 4 to the transom. In erecting the boat, the frames can all be prepared to the dimensions given, and then erected along the keel member, so that they are plumb to the base line.



Construction details for the 16-foot outboard engined speedster Whiz

The curved stem piece will call for considerable effort on the part of the builder, and to facilitate the work, sections have been drawn through it at four different points. These are reproduced, and it will be readily seen how they apply. They are marked A, B, C, and D, and section A is at the head of the stem, with the others following around at the points where the letters appear. The stem will need to be built up of suitable pieces of oak or ash, and then mortised, as indicated, to take the ends of the planking.

The several joints in the frames should all be well secured with two copper rivets, fastened over burrs in each joint. The gunwhale which will serve to tie the top end of the frames together, can be a clear piece of ½ by 1¼ inch spruce, and should be screw fastened to the top of the frames. The transom at the stern can be

(*Continued on page* 152)

SMALL MOTOR BOATS

Their Care, Construction and Equipment

A Monthly Prize Contest Conducted by Motor Boatmen

Questions Submitted for the April Prize Contest

1. Explain and illustrate a practical method of altering the engine bed in an old boat to fit a new engine, and aligning and fastening down the engine.
(Submitted by W. B. M., Newburgh, N. Y.)

2. Should no line drawing of the hull be available, how may the lines be taken from the hull itself, when hauled out, for the purpose of making such a drawing?
(Submitted by H. H. P., Los Gatos, Calif.)

You Should Attend the Show

Every Boat Enthusiast Will Find the Reasons Given in These Articles of Benefit and An Addition to His Store of Knowledge

Answers to the Following Question Published in the December Issue

"Why should every boat enthusiast attend the annual Motor Boat Show, and what benefits will he obtain by making the trip?"

Seeing Is Believing

(The Prize Winning Answer)

"SEEING is believing." Further than that it is the best way to obtain first hand information and that is exactly what one gets when he visits the Motor Boat show.

The show is really a large illustrated catalog, with the illustrations, real boats, real motors, real accessories and real men of experience ready and eager to tell concisely what one wishes to know concerning the exhibits.

To the man who is contemplating buying or building a boat for the season of 1926, attendance at the coming show is an essential step. At no other time during the year will he be able to find under one roof so many of the different factors that go to make a finished hull.

In other words, for the price of admission he will find placed at his disposal the boat and engine building talent of the country.

For his convenience he will find hulls brightly lighted throughout and access to all parts of the same made easy and inspection invited.

Very often it is the case that motors, reverse gears, electrical equipment, etc., have cutaway sections that permit one to see at a glance the interior makeup and the mode of operation. The exhibitors spare no pains to thoroughly acquaint the public with everything pertaining to their products.

To the beginner at the game a visit to the show will be an education. In the course of a few hours it will be possible for him to acquire information that in the ordinary course of events would take him years to obtain.

Rubbing elbows with thousands of boating enthusiasts he will hear their comments pro and con concerning the exhibits and will be able to apply worthwhile information so obtained to good advantage in his own case.

Very often he will obtain a fund of information from persons with whom he may chance to talk, information that can only be obtained in that way. For instance, he will get first hand information concerning the choice of a propeller, the best position for gas tank, galley, toilet, etc., locations that differ materially in some designs.

In this connection he will get the user's idea on these locations as contrasted with the architect's or in accordance with the architect's views, and thus be able to make an adjustment that will best suit his needs.

Most of the criticism that he will pick up among the crowd will be constructive, since the exhibitors that can afford to place their wares in the show are financially strong and manufacture reliable articles. He will find that the general tendency is for the crowd to be inclined to swear by the exhibits rather than at them.

For the old timer who plans no change in his boat or its equipment a visit to the show will renew his midsummer enthusiasm as well as keep him abreast of the times regarding improvements in hull designs and particularly in the refinements that are rapidly taking place in the mechanical equipment of motor boats.

To the newcomer and the old timer will be given the opportunity to visit scores of establishments in and around New York City that are identified with boating interests. The plants wherein anything from a dink to a modern motor yacht are made, as well as complete engine shops, will be but a matter of a few minutes' ride from Broadway.

Hundreds of laidup craft that are offered for sale will be within reach of the prospective buyer in the many boat yards that will be found in the indentations of Manhattan island.

To miss the 1926 show will be to miss a spectacular, interesting, instructive event. Not the least interesting of the exhibits will be the showing of boats that have made history in the past season, either along the lines of speed or through lengthy journeys successfully taken.

The motor boat enthusiast will leave the show with palms itching for scraper and paint brush and eagerly await-

Rules for the Prize Contest

READERS are urged to consider the above questions for the April issue, and send answers to them to the Editor, MoToR BoatinG, 119 West 40th Street, New York, N. Y. Answers should be (a) in our hands on or before February 25, (b) about 500 words long, (c) written on one side of the paper only, (d) accompanied by the sender's names and addresses.

The names will be withheld and initials used.

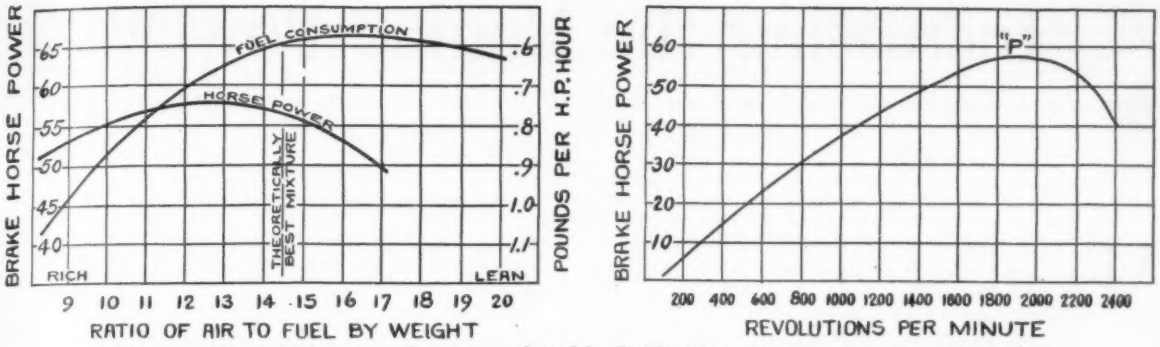
QUESTIONS for the next contest must reach us on or before February 10. The editor reserves the right to make such changes and corrections in the accepted answers as he may deem necessary.

The prizes are: For each of the best answers to the question above, any article or articles sold by an advertiser advertising in the current issue of MoToR BoatinG of which the advertised price does not exceed $25, or a credit of $25 on any article which sells for more than that amount. There are two prizes — one for each question — but a contestant need send in an answer to only one if he does not care to answer both.

For answers we print that do not win a prize we pay space rates.

For each of the questions selected for use in the following month's contest, any article or articles sold by an advertiser advertising in this issue of MoToR BoatinG of which the advertised price does not exceed $5, or a credit of $5 on any article which sells for more than that amount.

All details connected with the ordering of the prizes selected by the winners must be handled by us. The winners should be particular to specify from which advertisers they desire to have their prizes ordered.



Some power and fuel consumption curves plotted by R. W. H., in his reply to the second question

ing the day when his old hooker will take to the water.

J. E. M., Norwich, Conn.

The Boatman a Critic

PRACTICALLY everyone who takes up boating—whether as a business, a sport, or a recreation—possesses what may be called an unbeaten-path complex. He is attracted instinctively by the great natural call of wind and wave and the unusual difficulties and opportunities of the water-way of satisfying his wants or ambitions.

This natural quest for unusual elements tends to make the typical boatman a discriminating person as well—not that he is fastidious in dress, person, or manner, but, rather, he has keenly scrutinizing and analytical traits that make him a competent critic of what is good or bad in his type of boats and boating. He is what is commercially known as a hard man to sell.

Recognizing such factors, the manufacturers and dealers of boats, marine motors, and equipment have instituted and consistently maintained for twenty-one years the annual Motor Boat Show at New York City. In few lines are such expensive and sincere efforts made to exhibit, for public approval and criticism, the latest results of progressive design and manufacture.

Although lacking their natural aquatic environment and somewhat handicapped by the narrow or limited geographic appeal of the New York setting for the national show, motor boats and their fittings invariably attract much attention at these events. Many sales are directly traceable to these exhibitions, while the contacts established resulting in ultimate sales are very encouraging to the exhibitors. They dispel the dull season inertia of yard and shop and minimize the production difficulties of a business which is inevitably rather seasonal. The show method of conspicuous, side-by-side display of competitive products is typical of American selling policies.

The typical boatman is a fair-playing fellow, but he is shrewd enough to see that it is a personal advantage, not just an obligation, to go to a boat show in New York (or nearer his home if progressive local marine merchants stage one). He wants to sell himself on what his own experience or opinions have convinced him is best in craft and motors. He wants to take time to make his decision after going over all of the approximations of his ideal. The investment at stake may or may not be of importance, but the assurance of definite personal satisfaction over a reasonably long period is something that must be well established in the boat buyer's mind before he reaches for his check book.

Unquestionably, we have in the present market too many different types and sizes of motor boats and engines, too much variation in hulls, decks, cabins, equipment, and finish. Such conditions make for high first costs, maintenance, and depreciation charges and retard the deserved popularity of motor boats. Motor boat show visitors have given constructive criticism of such conditions. Exhibitors have acknowledged changing demand trends and set about to meet them. Both have to strike the mutually happy medium of a suitable boat at a suitable price for the average of the several main classes of purchasers.

The standardization policies adopted by the more progressive manufacturers and dealers tend to relieve this situation, but such policies must be conducted discreetly, not forgetting that our motor boat customer is a particular man and likes to feel that he is getting something exclusive and particularly suited to him, even in a moderate-priced boat.

Given a good product and a good national annual show, the third and deciding factor (the good customer) is sure to materialize, although he may have to journey hundreds or thousands of miles to attend it. He cannot turn out 100% strong for the occasion, but there will be enough of him there for those catering to his needs to use him as a pattern in gauging the qualities to be sought and avoided in craft of the future.

D. McC., Cleveland, O.

For Pleasure and Information Attend the Show

CAESAR said, "I came, I saw, I conquered." If you come to the Motor Boat Show you too will see and your love for nature and the great out doors will conquer, and you will soon own a boat or sign on as crew with some of your friends. The man who already owns a boat is not immune to the sting of the Bug; it makes him more enthusiastic. The sting is not at all dangerous or painful but, once the spirit gets into your veins there is no cure for the enthusiasm excited. All summer, this bug's favorite haunts are around the water, wherever boats are used or built, but as winter approaches he retreats to the boating magazines, except for the week of the Motor Boat Show, which is his busiest time. His approach used to be accompanied by a distinct chug-chug but as the bug became more refined with the refinement of marine motors, a faint hum as of an eight cylinder engine hitting them all at high speed is the only warning of his approach. Often the sting is not noticeable for some time after and no inoculation against the sting has yet been discovered.

Would you like to have a larger or better boat? You may be satisfied as far as the hull is concerned, but wouldn't you enjoy refitting, altering, or adding to the equipment? Do you admire pretty things or crave comfort on a hot summer day? Would you improve your appetite and constitution? Did you ever wish that you could get away from everything and be alone for a couple of hours? Like to swim and play around the water; love the ladies or appreciate a good meal, home cooked; or enjoy entertaining without being all dressed up for the occasion?

You will find the answer to all these questions and many more that you will wish answered, at the Motor Boat Show. Don't miss this big event. It will only cost 75c and you will see more real beauty of the

(Continued on page 380)

Increasing the Engine Power

Alterations and Additions to the Four Cycle Engine Which Will Increase the Horse Power Produced From a Given Piston Displacement

Answers to the Following Question Published in the December Issue

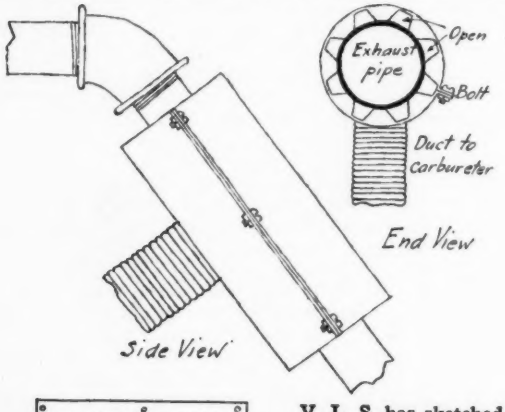
"Describe and illustrate what changes you would make to a four cycle marine engine in order to increase its maximum rated power per cubic inch displacement."

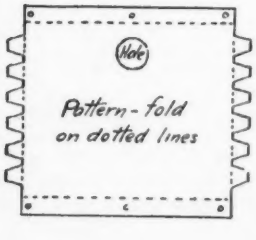
MOST of us wish to get the maximum power from the motors which are installed in our craft, and in many cases we do; but there are also a large number of boat owners who lose as high as 35 per cent. of the available power by incorrect installation, or improper use and operating. Then there are those who have motors which are positively sick, due to being in poor repair, or those naturally weak from poor design. In order to cover most of these cases where owners are not getting good results, let us take up a few of the most common causes as well as the obvious remedies which can be applied to overcome them.

The most common faults among all classes of boatmen are incorrect installation and operation. Some of the blame may be placed on the man who installed the engine and its accessories in the boat, but the most should be placed with the owner who does not take the trouble to find out the correct methods and employ them when he finds he is not getting the results he should. Maybe the list below will give you an idea:

OVERLOADING

Cause:—Propeller too large or with too much pitch.
Remedy:—Install one of correct size.
Cause:—Propeller blades bent or damaged.
Remedy:—Straighten or replace with undamaged one.
Cause:—Propeller blades strike shoe or hull.
Remedy:—Place propeller further aft, bend shoe down, or use smaller propeller.
Cause:—Propeller shaft bent or rough in bearings.
Remedy:—Straighten or renew, using bronze for salt water.
Cause:—Stuffing boxes or stern bearings binding.
Remedy:—Loosen packing, reline or scrape out surplus metal.
Cause:—Shaft hole out of line or too small for shaft.
Remedy:—Ream or bore out.
Cause:—Thrust bearing on shaft out of line, binding or not taking thrust.
Remedy:—Line up and install so that there is no bind and thrust is absorbed, loosen slightly if too tight.
Cause:—Shaft installed out of line.
Remedy:—Line up correctly.



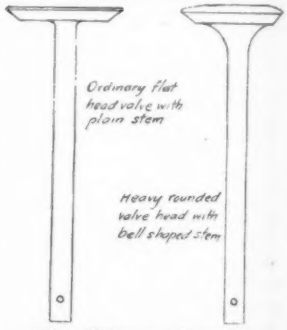


V. L. S. has sketched a pattern for a hot air stove suitable for most engines

Cause:—Reverse gear out of line.
Remedy:—Line up with propeller shaft.
Cause:—Reverse gear out of line.
Remedy:—Shaft bent, reverse band dragging or improper oil or grease. Install new shaft, lower reverse band and lubricate properly.
Cause:—Motor out of line.
Remedy:—Line up with propeller shaft and reverse gear.
Cause:—Motor too small or of too high a speed.
Remedy:—Install one of correct size and speed for the hull.

IMPROPER OPERATION

Cause:—Driving too hard.
Remedy:—As a rule, run under about ⅞ throttle with spark full advanced.
Cause:—Running hot, due to poor cooling or oiling.
Remedy:—See that motor gets plenty of water and oil, but not too much.
Cause:—Running too cool or with too much oil.
Remedy:—Cut down on supply.
Cause:—Backfiring or lagging caused by improper carburetion.
Remedy:—Adjust gasoline needle and air valves correctly when motor is thoroughly warm.
Cause:—Fouling or choking by all the air taken from hot stove or base.
Remedy:—Take at least ¼ of the air for carburetor from outside atmosphere.
Cause:—Running hot from spark retarded too far.
Remedy:—Always run with spark as far advanced as possible.
Cause:—Accessories out of adjustment or in need of lubrication.
Remedy:—Adjust properly and oil.
Cause:—Running hot from lack of air for external cooling.
Remedy:—See that a good supply of air is supplied all around the motor while operating.



The difference between ordinary and better valves

Motors showing signs of general debility and weakness should have a careful inspection to find what is wrong, and then give them a careful overhauling, adjusting or replacing any and all parts necessary. The following list may help in locating some of the customary symptoms and repairing or correcting the fault:—

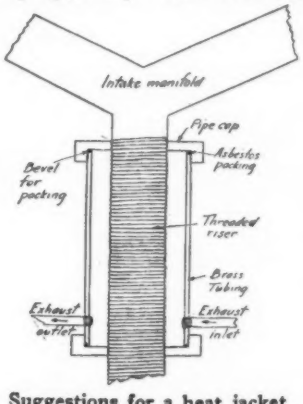
KNOCKING

Cause:—Bearings loose.
Remedy:—Tighten or replace.
Cause:—Shafts bent or worn.
Remedy:—Straighten or replace.
Cause:—Pistons or rings worn or defective.
Remedy:—Replace with new oversize, carefully fitted.
Cause:—Accessories worn or defective.
Remedy:—Replace or adjust.
Cause:—Overloaded.
Remedy:—Find the cause and eliminate as in above chart.
Cause:—Flywheel loose.
Remedy:—Rekey, rebush or tighten.
Cause:—Couplings loose.

Remedy:—Tighten or replace.
Cause:—Carburetion incorrect.
Remedy:—Set while motor is warm for low and high speed adjustments.
Cause:—Poor cooling or lubrication.
Remedy:—Adjust correctly or replace any parts defective.
Cause:—Worn or broken gears.
Remedy:—Replace with new ones.
Cause:—Chain drive worn or out of adjustment.
Remedy:—Replace or adjust.
Cause:—Broken piston rings.
Remedy:—Replace.
Cause:—End play in crank shaft.
Remedy:—Renew bearings.
Cause:—Loose valve or tappets.
Remedy:—Renew.
Cause:—Motor or clutch loose on bed.
Remedy:—Renew or tighten fastenings.
Cause:—Carbon deposits.
Remedy:—Clean and grind valves.
Cause:—Old motors with too high compression.
Remedy:—Use two gaskets under head, or metal or fibre filler between cylinder and base.

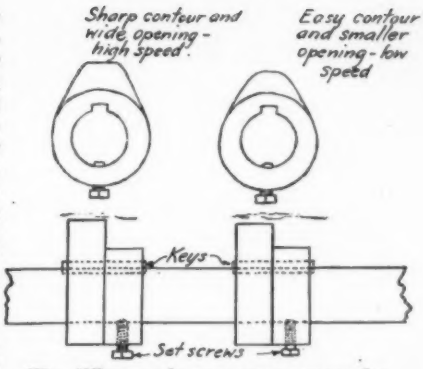
WEAK

Cause:—Missing due to dirty or defective plugs, leaky or defective valves, leaky gaskets, too much oil.
Remedy:—Replace any defective parts, time ignition correctly, adjust lubrication system.
Cause:—Leaky pistons or rings.
Remedy:—Install new parts in place of those worn, or have cylinders reground with new pistons and rings fitted.
Cause:—Improper valve or ignition timing.
Remedy:—Check up with manufacturer's instruction book and set correctly.
Cause:—Improper carburetion.
Remedy:—Adjust carbureter correctly for high and low speeds, when engine is warm.
Cause:—Connecting rod bearings worn so that piston does not travel high enough in cylinder bore.
Remedy:—Rebabbitt or replace worn bearings.
Cause:—Breaker or distributor points set incorrectly.
Remedy:—Adjust correctly, generally about 1-32 inch correct setting.
Cause:—Parts of motor too tight.
Remedy:—Adjust or ease off binding parts with file or emery.
Cause:—Excessive carbon deposits.
Remedy:—Clean out and grind valves.



Suggestions for a heat jacket around the intake manifold

The above tables or troubles cover the majority of faults which are likely to cause trouble in getting the rated horsepower out of the average motor, however, there are many other little things which go wrong from time to time, and which will cause power losses. Clogged mufflers or exhaust lines, exhaust lines too small or with too many bends, gasoline tanks or lines which will not feed gasoline to the carbureter correctly, flywheels rubbing against motor beds, floors or keels, short circuits in ignition systems, too much cooling water run through exhaust lines, excessive number of accessories for the motor to drive, and others, will all reduce the revolutions. Sometimes, power losses from these sources are negligible, while in other cases, they absorb an immense amount of the motor's energy. Therefore, when starting out to increase the power of any particular engine, look over every part of the motor and the installation, in order to make sure that the power losses are due to defects or improper use, rather than improper design.

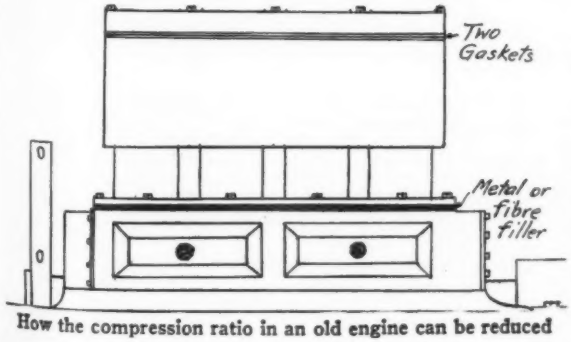


The difference in cam arrangement for different speeds of engines

When you have finally gravitated down to changing the design in order to obtain the necessary power which you think is possible with your motor, start in carefully and get everything as it should be. In order to help you, the following will give some details to start on.

In any four stroke cycle engine, the power output is measured not only by the bore and stroke, but by the load it will carry at its maximum number of revolutions. Present day motors are carefully tested out in the factory with some device which will measure the brake horsepower at different revolutions. With most of these devices, a card record is made showing the curve of the horsepower. This is done in order that the tester will know at what number of revolutions the maximum number of horsepower is being developed. If it is found that some particular motor under design is only developing three-fourths of the power that it should at the required number of revolutions, or is showing a dropping power curve when the revolutions are at a point where it should be showing a level or rising curve, the motor is carefully checked over and changes made in various parts or accessories in order that the power will be increased. Of course, very few of the readers will have any facilities for making a test of this sort, and you can only judge the power output of your outfit by comparing it with a similar one in another boat. When you have found one and the comparison shows that your engine is weak, endeavor to get permission to measure the different parts of the motor that you can change yours to its specifications. In this manner, you have something to work toward, otherwise, unless you know a great deal of motor design, it is best that you call in someone who understands this work thoroughly.

The governing factors in the power output are compression, valve sizes, valve timing, manifold design (both intake and exhaust), weight of moving parts including flywheel, and carburetion. One later improvement in a few modern motors is the improved motor head, with the top of the combustion chamber shaped so that the gases are given a whirling motion on entering, and the burning of the compressed charge is hastened. Unless you have a motor whose manufacturer has adopted and built such a head for replacement on the older styles of his product, this improvement will have to be passed up, as the average owner would be unable to design one



How the compression ratio in an old engine can be reduced

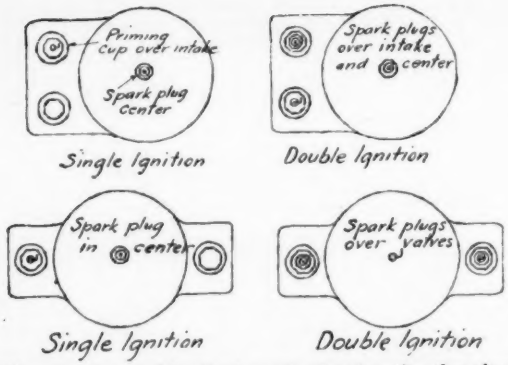
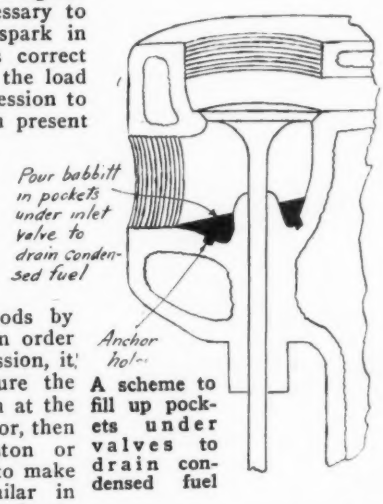


Diagram to show the best spark plug location for single and double ignition in both L and T head engines

suitable for his engine. Providing that the above mentioned factors are not as they should be for maximum power, there are many little improvements the average mechanically inclined owner can make which will give good results, and these things are taken in order.

COMPRESSION

Some of the older motors were originally designed for high test fuels, consequently, in using the fuels available today, it is necessary to run with reduced throttle or spark in order to run the motor at its correct number of revolutions carrying the load it should. Reducing this compression to a point where it compares with present day motors of approximately the same bore, stroke and number of revolutions will correct this fault. Placing two gaskets under removable cylinder heads, placing a fibre or metal liner between base and cylinders, or using shorter connecting rods, are the methods by which you can do the trick. In order to arrive at the correct compression, it is necessary for you to measure the combustion chamber with piston at the top of its stroke in a modern motor, then compute how much your piston or cylinder needs moving in order to make the combustion chambers similar in both motors. Be sure and get each one the same, providing yours has more than one cylinder, and remember that a little movement of these parts makes a great deal of difference in the motor's performance. On some home made motors, the compression is not high enough, consequently the explosions are weak and the power available falls short of what it should be. In cases of this sort, some method must be devised so that the size of the combustion chamber can be made smaller. Bolting or riveting metal plates on the top of pistons can be tried until you arrive at the approximate compression you desire. Then these pistons should be removed, and ones made with the head that much higher in the cylinder bore. In some cases, where the cylinder flange is very heavy, it is possible to take off metal there, which will drop the cylinders, but as a general rule these flanges are none too heavy in the first place. Another method is to have new rods made slightly longer than the old ones, which cause the pistons to go up farther in the cylinder bore. Compression ratios vary from 40 to 90 pounds, depending upon motor design, number of revolutions, weight of moving parts, load motor is to carry, etc., therefore it is impossible to give a table which would tell the correct number of pounds compression in different size motors, as there are too many other things governing, which would cause the proper compression to vary even in two motors apparently alike.



A scheme to fill up pockets under valves to drain condensed fuel

VALVE SIZES AND TIMING

These can also be checked with the other motor whose performance you are endeavoring to equal. Large valves are necessary in high speed engines, in order that the cylinders will get as full a charge of fuel as possible on the suction stroke and have a large opening for the passage of the burnt gases on the power stroke. In the larger valves there is a tendency for the heads to warp. In order to get away from this trouble, many manufacturers have redesigned their motors so that two intake and two exhaust valves of smaller diameter are used in each cylinder instead of two large ones. Making the top of the valve stems bell shaped where they join the heads also has a tendency to stop this warping and conduct the heat away from the heads. When speeding up the revolutions of any motor, be sure that the valve guides in the cylinder castings are water-jacketed, otherwise, you may experience trouble with the valves sticking in these guides, as the ordinary metal guide will hardly conduct the heat away fast enough. Valve timing depends upon the shape of the cams and setting to open and close at the proper time. If your motor is of the L head type, with both intake and exhaust valves on one side of the motor, all the cams are on one shaft, and any change in timing will affect all the valves. In cases of this sort, it is necessary to make up a new camshaft with an entirely new set of cams, properly shaped to get the required opening. The slower the speed of the motor, the easier are the curves on the outside of the cams; while, the faster the speed, the sharper the curves. This is in order that the valves will open and close quicker in the higher speed classes. Even then, it is necessary to use stronger springs on the valves so that their motion will follow the shape of the cam as quickly as possible. Opening and closing of the intake and exhaust valves in motors of different speeds vary somewhat, according to the designer's ideas, compression, valve sizes, manifold design, etc.

In many of the high speed motors there is a period where both the intake and exhaust valves are open, occurring when the intake valve opens just before the exhaust valve closes. It is not good practice, owing to excessive backfiring through the carbureter while the motor is cold, but in speeding up the valve openings, better power performances are made. A good method for the amateur, however, is to check carefully the valve timing on some good motor of modern manufacture which operates at about the same number of revolutions per minute as he intends to have his own run. Rather than attempt to mark off the outside of the flywheel in degrees; turn it to and mark it at both top and bottom centres; measure the outside circumference of the flywheel; divide this by 360, and you will get the fraction of an inch which represents one degree. By multiplying this fraction by the required number of degrees, you have it in inches to be applied on the rim of the flywheel before or after top or bottom center.

(*Continued on page 366*)

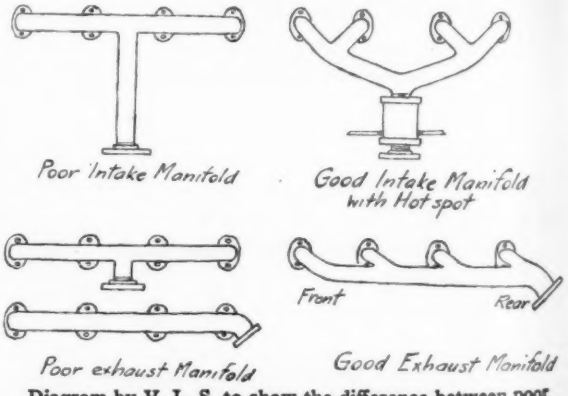
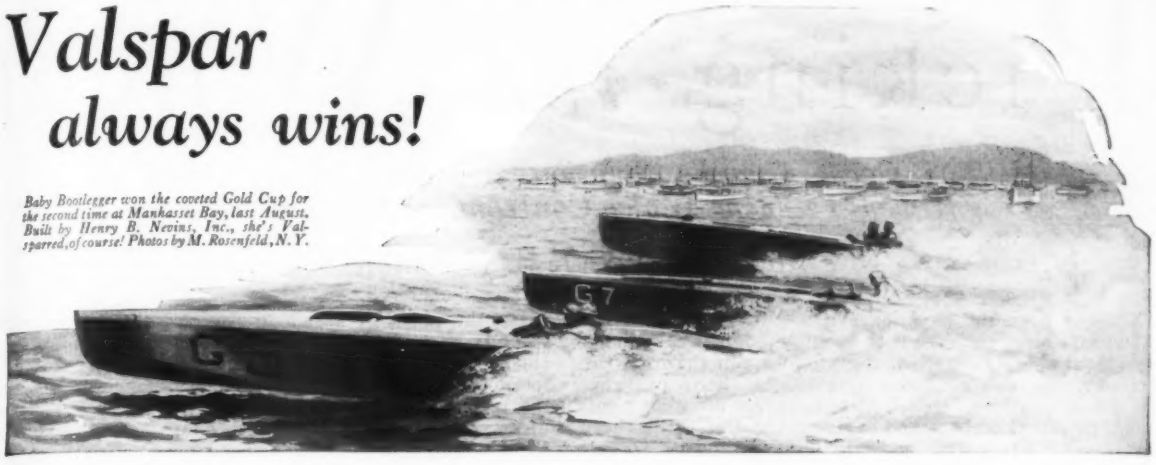


Diagram by V. L. S. to show the difference between poor and good manifolds

Valspar always wins!



Baby Bootlegger won the coveted Gold Cup for the second time at Manhasset Bay, last August. Built by Henry B. Nevins, Inc., she's Valsparred, of course! Photos by M. Rosenfeld, N.Y.

EACH year when the boating season draws to an end, and yachts and speedboats are either housed for the winter or are sailing in Southern waters, the list of the year's outstanding champions gives impressive tribute to Valspar's supreme quality and lasting beauty. For almost without exception, *every one is Valsparred!*

And this is not a matter of chance. For Valspar has won its commanding position among yachtsmen by sheer merit, by always giving the same unequaled service and satisfaction which have made it famous the world over.

Above: Valspar went with MacMillan to the Arctic on this Loening Amphibian plane last summer.

Below: Yachts of quality, large and small are Valsparred. The Shadow K, Carl G. Fisher's new Diesel yacht, built by the Consolidated Shipbuilding Corporation, is no exception to the rule

Even if the Lanai hadn't won the International Six-Meter races held last summer on Long Island Sound, Valspar would have come in first—for every one of the eight entries in these events, both American and Scandinavian, was Valsparred!

Above: The Teaser—Valsparred from stern to stern—established a world's record in the 105-mile international race for boats of her class last summer. She was built by Henry B. Nevins.

Above: Baby Gar IV, the boat that beat the 20th Century Limited's time between Albany and New York, was Valsparred.

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- Valspar-Enamel ☐ Choose 1 Color .....
- Valspar-Stain ☐ Choose 1 Color .....
- *Valspar Book* ☐

Picking *the* Wheel

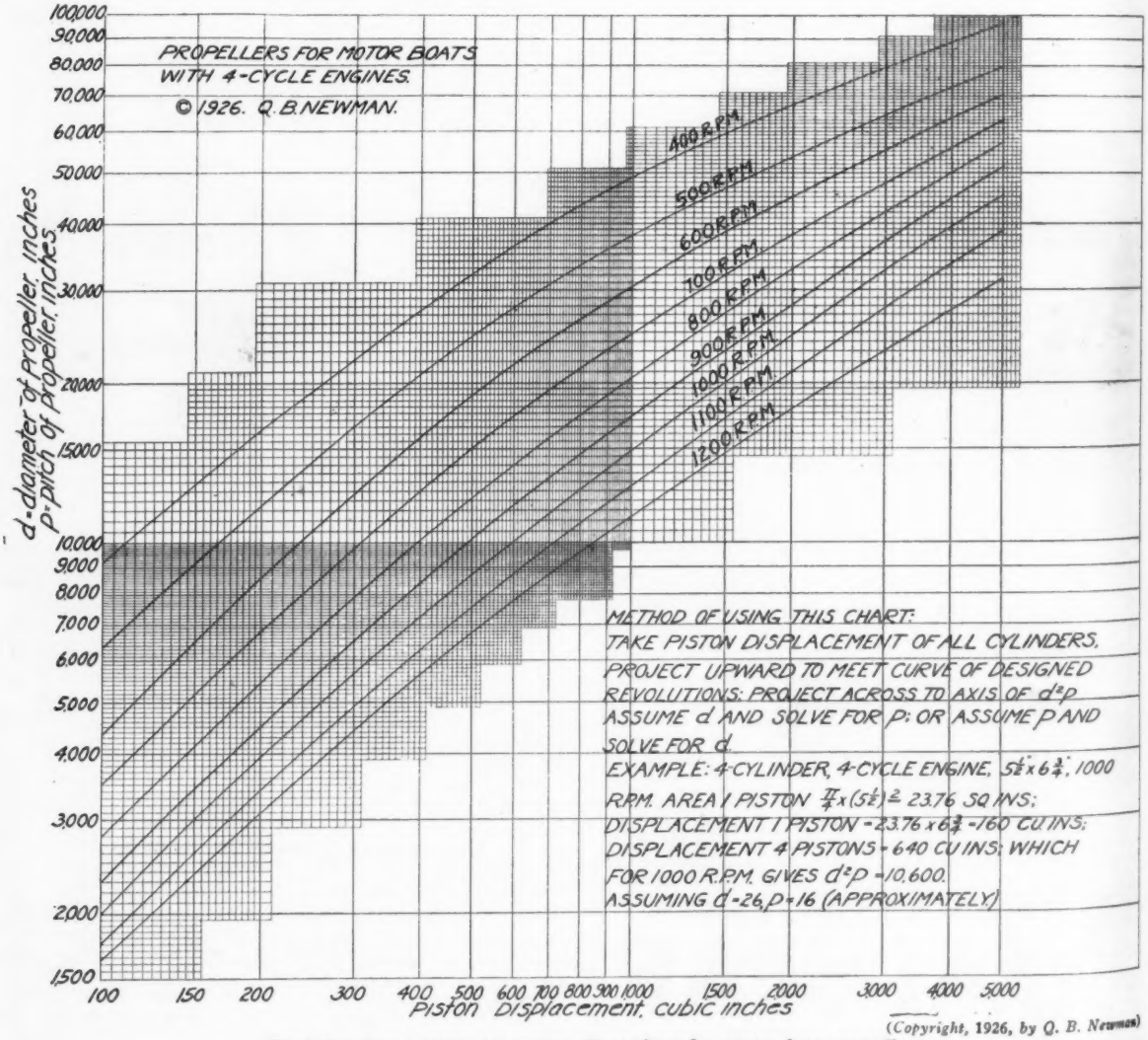
The Coast Guard's Solution for One of the Most Frequent Problems Which Confront the Motor Boat User

By Captain Q. B. Newman

IT has been the experience of the Coast Guard that propellers furnished with gasoline engines are almost invariably larger than the engines can drive at the rated r.p.m. This condition obtains also when a propeller is prescribed by propeller manufacturers after all pertinent details as to boat and engine are given. It has been observed further that radically different propellers are often furnished by engine builders for two engines that are alike and intended for similar service. The chief causes of this phenomenon appear to be two: first, the usual inertia of the human mind when applied to things pertaining to the sea; for although the speed of the gasoline marine engine has been doubled within the past few years, the old slow speed propeller is perpetuated; and second, assuming that the slip is to be normal and reasonable, the average boat is presumed to have a speed of 15 to 20 miles per hour. But whatever may be the cause, the results are obvious enough. The engine never gets up to speed, and, hence, never develops her rated power; the boat falls short of her speed possibilities; and the engine will stall in maneuvering at the slightest opportunity. And in addition to all this there are the groans and knocks of an overloaded and abused machine, with the resulting wear and tear that insure short life.

The practice of having the engine builder include the

(*Continued on page* 352)


PROPELLERS FOR MOTOR BOATS WITH 4-CYCLE ENGINES.
© 1926. Q.B.NEWMAN.
d-diameter of propeller, inches
P-pitch of propeller, inches
400 R.P.M.
500 R.P.M.
600 R.P.M.
700 R.P.M.
800 R.P.M.
900 R.P.M.
1000 R.P.M.
1100 R.P.M.
1200 R.P.M.
METHOD OF USING THIS CHART:
TAKE PISTON DISPLACEMENT OF ALL CYLINDERS.
PROJECT UPWARD TO MEET CURVE OF DESIGNED REVOLUTIONS: PROJECT ACROSS TO AXIS OF d²p
ASSUME d AND SOLVE FOR P: OR ASSUME P AND SOLVE FOR d
EXAMPLE: 4-CYLINDER, 4-CYCLE ENGINE, 5½ x 6¾, 1000 R.P.M. AREA 1 PISTON π/4 x (5½)² = 23.76 SQ INS;
DISPLACEMENT 1 PISTON = 23.76 x 6¾ = 160 CU INS;
DISPLACEMENT 4 PISTONS = 640 CU INS; WHICH FOR 1000 R.P.M. GIVES d²p = 10,600.
ASSUMING d = 26, P = 16 (APPROXIMATELY)
Piston Displacement, cubic inches

(Copyright, 1926, by Q. B. Newman)

Chart for determining the proper dimensions for motor boat propellers

Throw the Old Coffee Cups down to Davy Jones and ship a Gallant Set of Ovington China!

THE gravity route to Davy Jones on a one way ticket is the best of all send-offs for a set of china that disgraces some otherwise immaculate yachts!

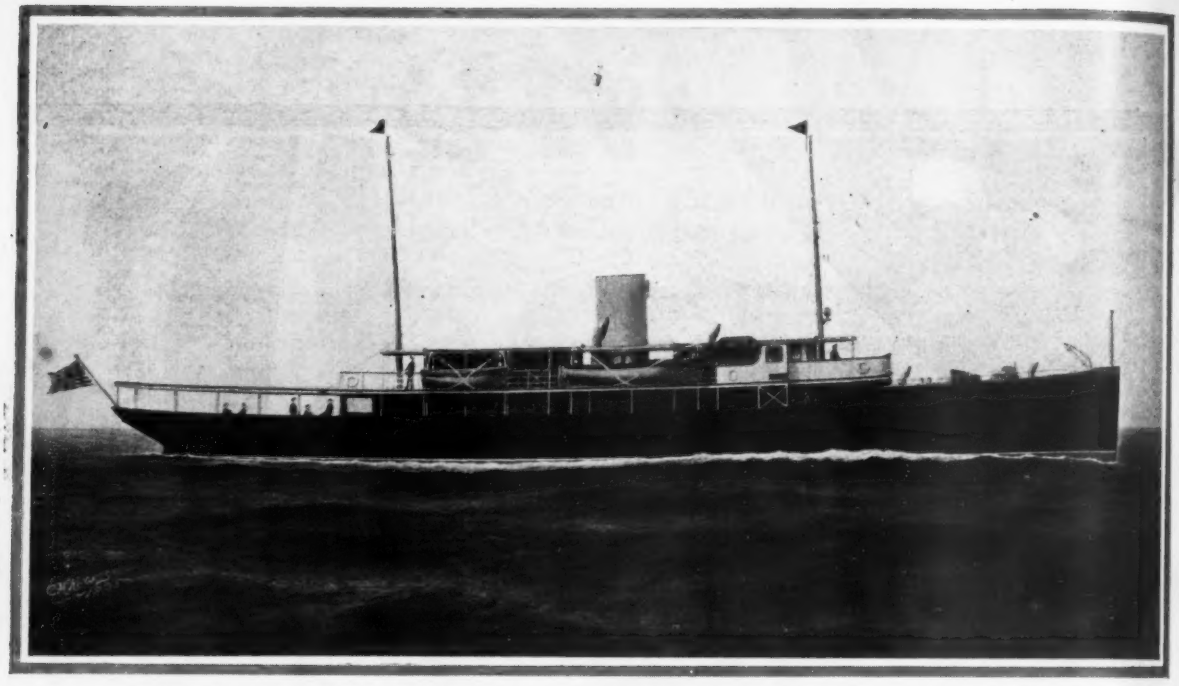
And the clear course to Ovington's is the best of all ways to get china that will do justice to the saucy ship of your leisure hours and days.

Nor is such a course fraught with uncharted perils to the treasure-chest. For, with as little as $100 in your dungarees you may have a beautiful set for six, decorated with your own and club flags. Crystal too may be had to match. Designs will be submitted gladly to any member of a recognized yacht club.

OVINGTON'S

"The Gift Shop of Fifth Avenue"

Fifth Avenue at 39th Street



Outboard profile of the new 171-foot motor yacht to be built for D. P. Davis from Gielow designs

New Motor Yacht *for D. P. Davis*

Henry J. Gielow, Inc., of New York, Designs One-Hundred-Seventy-One-Foot Craft for Tampa Yachtsman, Which Will Be Last Word in Yacht Design and Construction

ANOTHER modern seagoing Diesel yacht, designed by Henry Gielow, Inc., of New York, for D. P. Davis of Tampa, Fla., will shortly be built at the Todd Dry Dock Engineering and Repair Corporation at Brooklyn. This boat will be 171 feet in length, with a beam of 27 feet 4 inches, and a draft of 13 feet. She will be built according to Lloyd's highest classification.

Ample provision is made in the bow of the boat for a crew of ten, and staterooms for twelve officers. A mess room for them is also located forward, and each room is provided with wash basin, locker, and furniture. The galley is just aft of this, and will occupy the full width of the boat. The range will be of the Ray Oil Burning type, and in addition, there will be an Arco hotwater heater, refrigerator, and all necessary lockers, etc.

Owner's quarters will be aft of the engine room, and separated from it by a double steel insulated bulkhead. In addition, further separation will be secured by the placing of bathrooms between the bulkhead and staterooms proper. The entire space will act as a sound deadener for any possible noises which might occur in the engine room. The owner's stateroom occupies the full width of the boat, and is eleven feet long, fore and aft. It will have the usual equipment of bureaus, chiffoniers, dressing table, desk, night table, etc.

The guests' quarters are aft of the owner's stateroom, and consist of three double staterooms, each stateroom having two beds, and two single staterooms with single berths, and having access to bath rooms, and all equipped with the usual wardrobes, bureaus, dressing tables, chiffoniers, etc.

On the main deck will be a continuous steel deck house, the forward part of which will be occupied by the dining saloon, 24 feet long, with a mean width of 18½ feet so that it will be possible to seat comfortably at the table sixteen persons. A built in sideboard and buffet is on the after bulkhead of the dining room. The pantry is located just aft of the dining room with the steward's room opening on the port side, just aft of the pantry, while on the starboard side will be a deck toilet and wash room. Lockers on the starboard side of the passageway are provided for oil skins, guns, and fishing rods. On the port side is the entrance to the engine room, the large deck locker, and the fine big trunk room. The after end of the house is occupied by the living room 25 feet long, and a mean width of 20 feet. A large quarter deck aft is provided of over 50 feet in length, with a windbreak or deck shelter extending out from the sides of the deck house.

The upper deck is carried out over the house on the main deck to the sides of the ship, forming a very wonderful sun or promenade deck, approximately 85 feet long by 27 feet wide. On this deck are two teak houses, the forward one containing pilot house and chart room with Captain's stateroom. The after house is used as a smoking room, with an inside passage down to the main deck, and the wireless room being located in the after end of the smoking room. The small boat equipment consists of a 26 foot owner's sedan type mahogany launch powered with a Scripps motor, a 22 foot crew's launch powered with a Kermath motor. Two 21 foot metallic life boats and a 15 foot rowing dinghy. All of these are carried on davits.

The engine room is provided for the installation of a pair of six Bessemer oil engines, developing 800 horse power, at 250 r.p.m. In addition to this there will be two Bessemer Diesel electric generators of 30 k.w. each, with all other auxiliaries necessary for the proper and up to date installation of the craft at this time.

Fuel oil capacity will be sufficient to give her a cruising radius of approximately 10,000 miles with a fresh water capacity of approximately the same amount.

Now the Super Elto!

The Elto for 1926—
the Super Elto—

is the peak of "outboard" advancement — the climax of the sound outboard motor designing and water-wise good sense of Ole Evinrude. A masterful development of effectual power kept within light weight. A scientific combination of power, portability and every other feature vital to the need, comfort, convenience and safety of the user — on fresh or salt water — for commercial or pleasure craft — on calm or smashing seas. The Super Elto offers —

1. Full 4 H. P. S. A. E. rating! Abundant power for rugged commercial use—to insure seaworthiness under all conditions, and for surpassing speed on pleasure craft. 4 H. P. by actual **increase** of **cylinder capacity,** with no increase in weight and no loss of compact carrying convenience or easy portability.

2. The same light weight! Slightly more than 50 lbs.! An additional horsepower and not an ounce of increased weight. A Super-powered, **easily portable** power unit.

3. Thrilling, foaming speed! Up to TWELVE miles per hour on ordinary rowboats. Up to FOURTEEN miles per hour on canoes or lighter, faster hulls.

4. New principle of boat and motor control! Control your motor, speed up, slow down or stop from any part of boat. Enables you to "trim ship" not only for safety in rough water but to get greatest possible boat speed. Another exclusive feature added to vibrationless tiller-line, safe rudder steering.

5. Silence that brings peace to the waters! Another new exclusive feature of the Super Elto. A new principle of exhaust. No muffler to pocket speed or power. Instant, silent, underwater exhaust through new "fish-gill" principle.

6. No disagreeable exhaust odors! Gases washed through underwater exhaust.

7. Dual-jet carburetion! Two light, quick-action valves giving doubly fine vaporization, perfect carburetion and greater motor speed. A **plus** factor of power!

8. Finger-tip, quarter-turn starting! The most vital single feature ever built into an outboard motor. No tugging or pulling over compression. A flip of the flywheel starts the Elto — merely a finger-tip job.

9. Safety flywheel! Starting button drops flush into rim. Greater convenience and perfect safety.

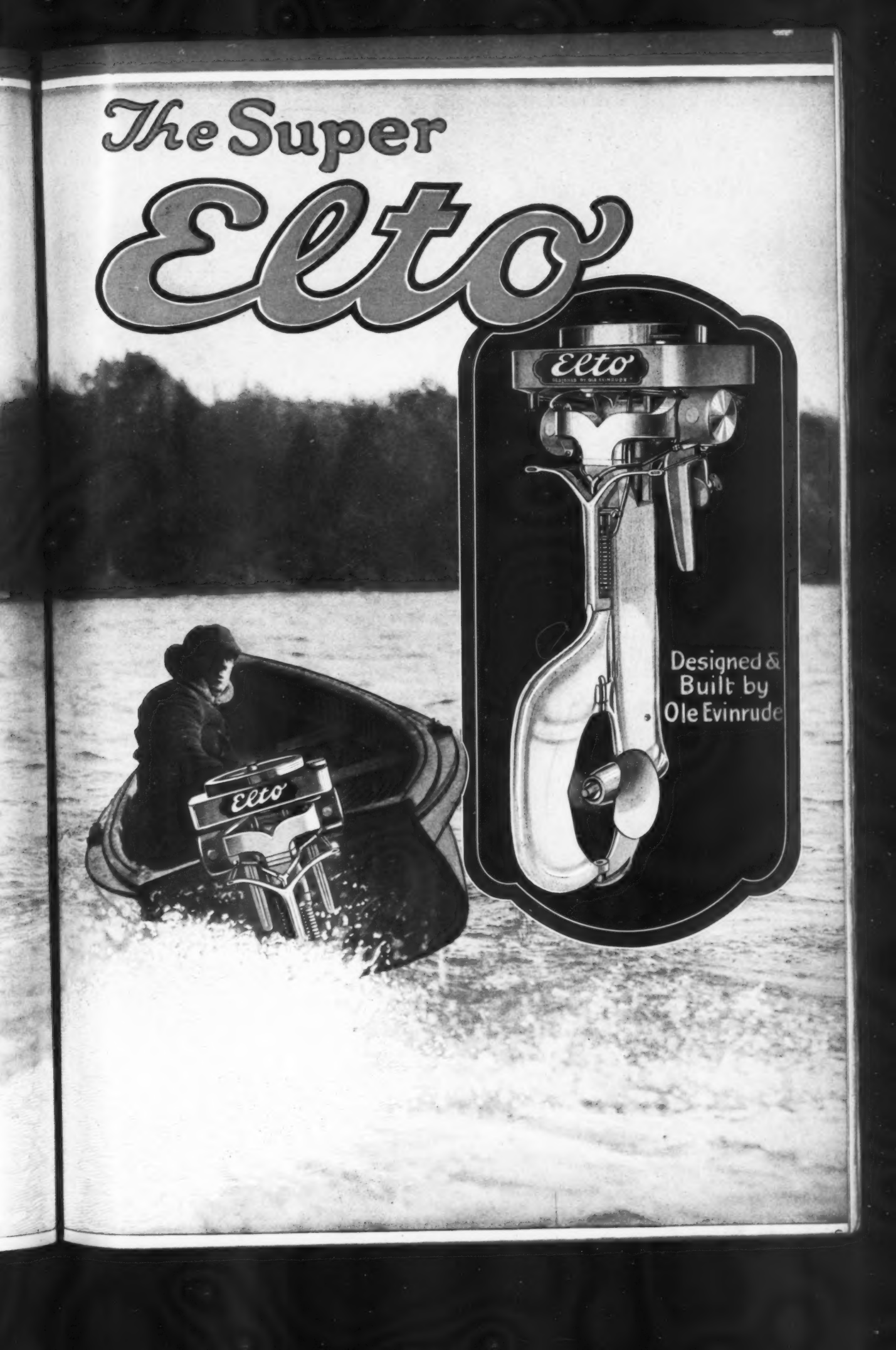
10. Propello-Pump! A patented and proved Elto feature which eliminates the parts of the greatest outboard wear and trouble. A pump without mechanical parts.

11. Safety-Shoe! Run aground without injury to propeller and with practically complete protection from shearing of pins.

12. Safe rudder steering! The Super Elto is the only outboard motor which provides rudder steering—the time proved and accepted method of boat control and manageability—Ole Evinrude's provision of safety for you and your family.

With all these new features added, the advantages which have always made the Elto so popular have all been retained. These are the Sturdy Transmission Housing — Folding Rudder — Weedless Underwater Design — Absolutely Water-Proof Ignition — Liberal Bearing Surface — Safety Automatic Tilting — Quick Push-Button Reverse.

And still the same beautiful lines,
the same weight, the same price.


The Super
Elto
Elto
Designed &
Built by
Ole Evinrude
Elto

One Model!

No Increase In Price!

THIS greater Outboard—the Super Elto—with all its greater power and performance, its easy portability and unequaled exclusive features will be sold at no increase in price.

Concentration and *standardization* on one single model enable us to give this greater value for the same price.

Remember that the Super Elto gives full needful power for rugged commercial use and for boat seaworthiness in rough waters, and that light weight makes this power available for surpassing speed on pleasure craft. The Super Elto is an astounding value—a climax in design even for the unequaled marine and outboard motor experience of Ole Evinrude. Best of all, the master builder's experience concentrated on one model, makes certain of mechanical perfection—years of eager motor service.

To turn your boat's bow into a smashing sea is to know the masterful driving power of the Super Elto—to feel its eager leaping speed is to know that this is a Super Outboard—performing up to its name Super Elto!

We believe that this 4 H. P. Super Lightweight Elto is the ultimate outboard achievement for power, speed, portability, seaworthiness, safety and unquestioned dependability for standard hulls — outboard craft — dinghies — tenders—rowboats—for pleasure or commercial use on fresh or salt water.

The Super Elto offers beyond question the remarkable outboard value to the motor buyer and a great opportunity to the outboard dealer. Write for new, intensely interesting catalog today!

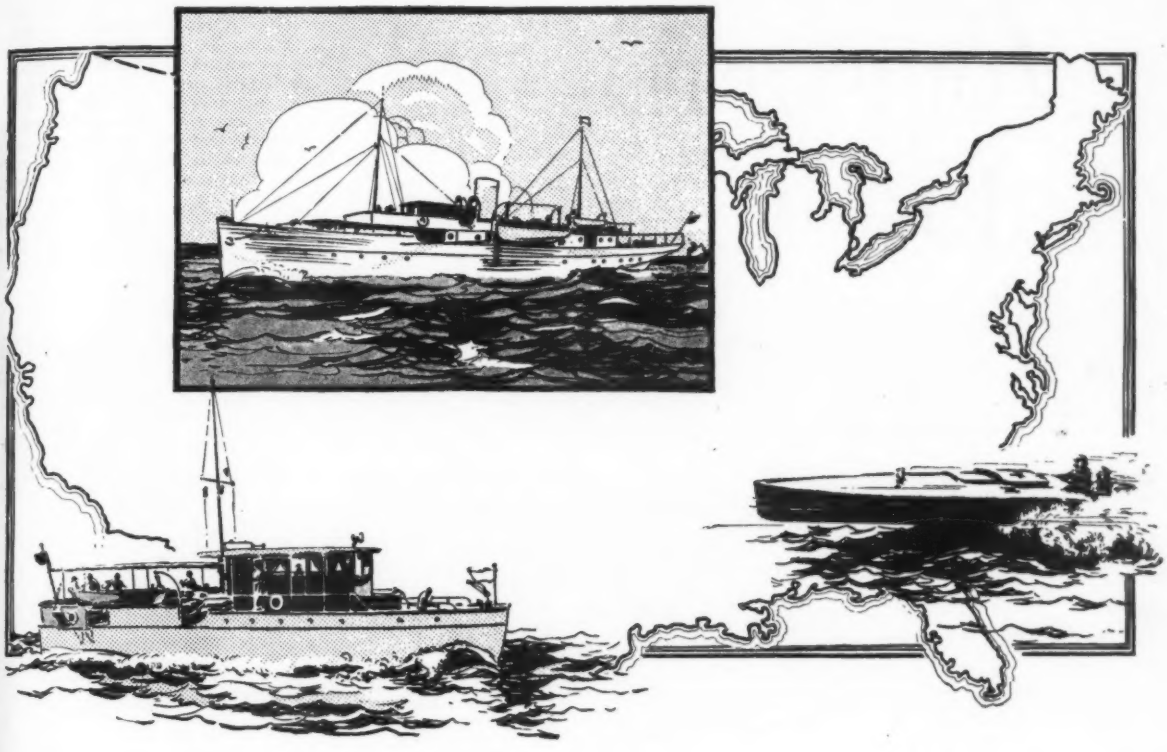
ELTO OUTBOARD MOTOR COMPANY

OLE EVINRUDE, President

Dept. F, Manufacturers Home Bldg. Milwaukee, Wisconsin

The Super

Elto



Whatever your cruising plans

—better engine results are what you want

WHETHER you have had your motor boat in commission in southern waters this winter, or whether you are laying your plans for more extensive summer cruises, better engine results is your most important problem. It is the operation of your engine that makes a cruise a constant worry or a continual joy.

You can be sure of thoroughly reliable engine operation only if you use lubricating oil that is scientifically correct for your engine.

Correct lubrication for your engine, of whatever type, has been made easy for you by the Vacuum Oil Company in three ways:

(1) *Through the manufacture of Gargoyle Mobiloils and Marine Oils of correct grades to suit all types of engines.*

(2) *Through a sales service at all leading ports.*

(3) *Through a Chart which will tell you the scientifically correct oil for YOUR particular engine.*

A good first step to take in determining the correct lubrication for your engine is to look for the Gargoyle sign at any dealers in any seaboard, lake, gulf or river city. There you will find recommendations of the correct grade of Gargoyle Mobiloil for your particular type of engine or motor, and supplies ready for immediate delivery.

GARGOYLE

Mobiloil

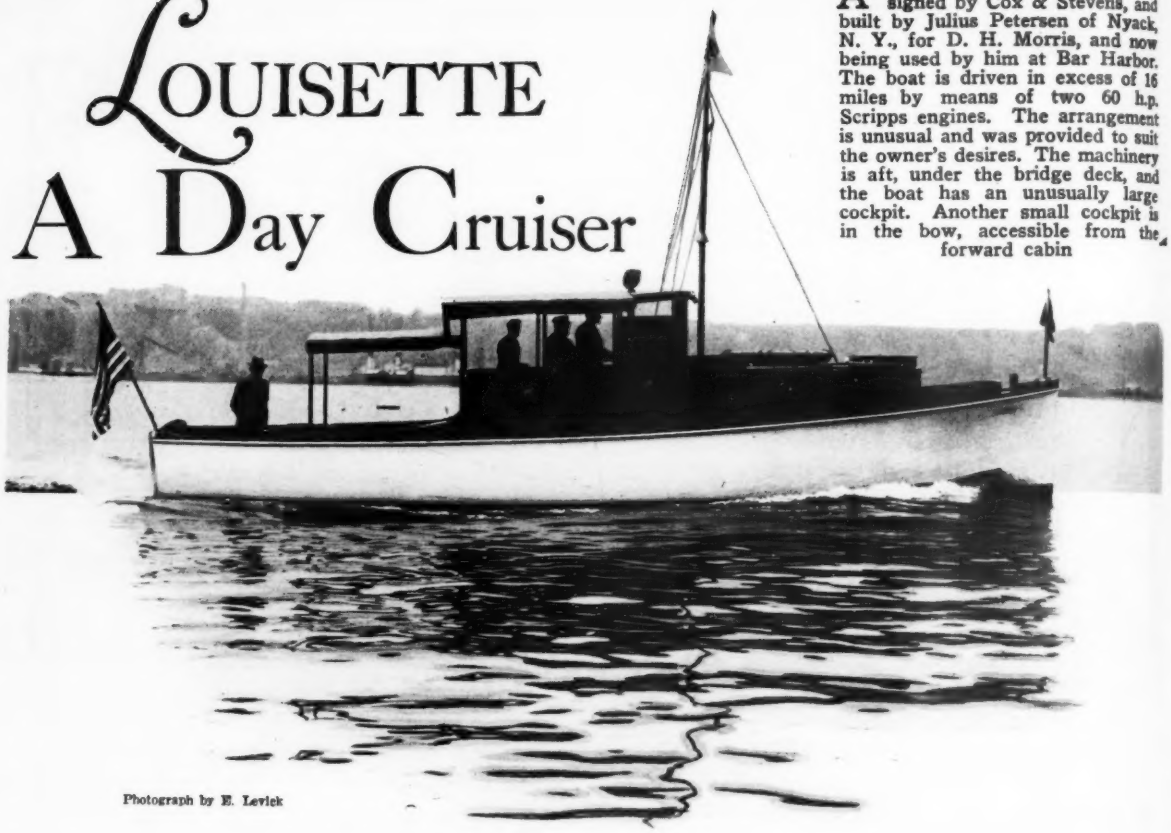
Make the Chart Your Guide

VACUUM OIL COMPANY *Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.* **NEW YORK, U.S.A.**

Advertising Index will be found on page 384

LOUISETTE
A Day Cruiser

A FAST 42-foot day cruiser, designed by Cox & Stevens, and built by Julius Petersen of Nyack, N. Y., for D. H. Morris, and now being used by him at Bar Harbor. The boat is driven in excess of 16 miles by means of two 60 h.p. Scripps engines. The arrangement is unusual and was provided to suit the owner's desires. The machinery is aft, under the bridge deck, and the boat has an unusually large cockpit. Another small cockpit is in the bow, accessible from the forward cabin



Photograph by E. Levick

YO-HO *A Fast One*

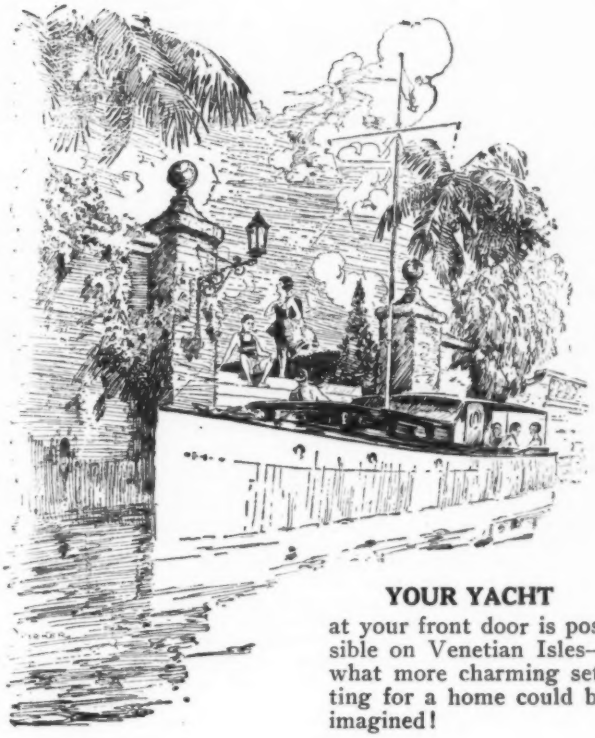
ANOTHER addition to the smart craft on Long Island Sound is Yo-Ho, a new fast cruiser, built by the Bath Iron Works for Clifford B. Brokaw, from designs by Cox & Stevens. The appearance of the boat is particularly pleasing, and speedy. Two 300 h.p. Sterling engines are used to drive the craft, and give it better than 25 m.p.h. She is double planked of mahogany, with excellent appointments throughout. Steel bulkheads separate the machinery space from the rest of the hull, and isolate the heat and noise. Yo-Ho is typical of the modern express cruiser, combining high speed, seaworthiness, and good appearance. She is handled entirely from the steering station on the bridge deck, where the operator has complete control of the power plants. All controls are brought to this point, and suitably protected by an adjustable windshield

Photograph by M. Rosenfeld

An Ideal Home for the Yachtsman

DOWN in the tropical section of sunny Florida—where it is always June—where the flowers bloom all the year, and the graceful cocoanut palms fringe the waterways—There lie the new VENETIAN ISLES—in the heart of beautiful Bay Biscayne, along whose shores nestle the twin Magic Cities of Miami and Miami Beach.

Southern waters have always been the paradise of the yachtsman. Winter or summer, the call of the Southern Seas impels. Every yachtsman hopes some day to have his home convenient to these superb cruising waters—a home where he may tie his craft to his front door.



YOUR YACHT
at your front door is possible on Venetian Isles—what more charming setting for a home could be imagined!

Just such a charming location is available on VENETIAN ISLES. These island gems, now being raised from the bottom of Biscayne Bay, will provide 12 miles of waterfrontage, all accessible by craft drawing several feet of water.

A great 100-foot boulevard, crossing these islands and connecting with cross-bay highways at the North and the South, will make this superb island property quickly and easily accessible by motorcar from the heart of either Miami or Miami Beach.

VENETIAN ISLES

Gems of America's Mediterranean

107 N. E. Second Avenue, MIAMI, FLA.

Florida Racing Season Opens This Month

(*Continued from page 37*)

Commodore Robert H. Gamble was elected Commodore of the new organization and H. Paul Prigg, Secretary-Treasurer. In their organization plans it was decided to perpetuate the Biscayne Baby class in its original form and to increase the interest in the class by having others build similar boats to race at Miami, Palm Beach and other southern regattas. Membership dues were fixed at one hundred dollars.

The Miami Yacht Racing Association will not confine its activities to the Biscayne Baby class alone but will foster interest in all branches of motor boat races and other forms of yachting. It is expected that eventually this organization will assume supervision of all motor boat racing in and around Miami. Already affiliation has been made with the American Power Boat Association. It is planned to hold monthly regattas not only during the winter season but throughout the year.

Never before in the history of the sport has such an active racing season been planned as during February, March and early April of this year, both on the west and east coasts of Florida. Beginning February 20-22 at Palm Beach, there will be an almost continuous series of Regattas at Tampa, Miami Beach, St. Petersburg, Winter Haven, Sarasota, Sanford, St. Augustine and Jacksonville. Although the freight and express embargo has made it difficult to get race boats to Florida via the regular transportation channels, yet ways are being found so that there should be no scarcity of racing craft when the starting signal is given. Then besides Florida is fast accumulating craft of her own and it will not be necessary to import racing boats many more years. Down there at present are a considerable number of such boats as the Chriscraft, Dodge Water Cars, Baby Gars, Dolphins, Dart Boats, Elco Cruisettes and Matthews 38's so that a very fair series of races could be arranged without going outside of the state for material.

Several national classes will be featured this winter including a race for Gold Cup boats at Miami Beach also a race for the Fisher Allison Trophy at the same meet. The St. Petersburg Sunshine Babies will not only race in their home waters but will participate in feature events at Tampa and Miami. The 151 inch hydroplanes are scheduled to race at Palm Beach, Tampa, Miami and Sarasota.

D. P. Davis of Tampa is building a class of Junior Gold Cup 21 footers to be powered with 6 cylinder Scripps motors which will appear for the first time at Tampa at their National Regatta scheduled for February 4, 5 and 6. These little boats should make a speed close to 40 miles an hour and no end of close and exciting competition. At the St. Augustine regatta early in April a race for the Interstate Trophy will be held.

The Biscayne Babies will perform at Palm Beach and Miami Beach. At the latter place the first annual competition for the new trophy recently presented by Governor Martin of Florida will take plcae. The Baby Gars are scheduled to make an excellent race for the Bradley Trophy Race at Palm Beach on Feb. 22nd.

Not the least important motor boat racing in Florida this winter will be the events for boats powered with outboard motors. While classes for this type of boat will be held at all the imortant races yet the climax will take place at Miami Beach on March 19 and 20 when the best outboard craft in the country will be matched for the new $2,000 Gold Trophy presented to the American Power Boat Association by Colonel E. H. R. Green of New York and Texas.

Cruiser racing will also be featured at all the important regattas including Miami, Palm Beach, Tampa and St. Petersburg. Classes have already been arranged for Elco Cruisettes and Matthews 38's.

For the first time in the history of the sport the best craft in the 151 inch class of the Pacific Coast may race against the Atlantic Coast and Middle West Champions in this class. From the west comes assurances that they will send Smiling Dan III with their champion crew Dick Loynes and Harvey Strong, Al Christie's Baby Mine with Vera Stedman at the wheel and William Harris' Quicksilver III driven by Vin Forsythe. It is expected that these Pacific Coast Champions will compete both at the Tampa regatta on March 5 and 6 and at Miami Beach on March 19 and 20.

The feature event of the Miami Beach Regatta, March 19-20 will be a race for Gold Cup boats. Already six entries have been received for this race which will probably consist of four heats of 12 miles each. Baby Shadow, owned by Carl G. Fisher of Miami Beach and New York, the fastest boat in this class in the world is entered, together with Nuisance owned by Mrs. Delphine Dodge Cromwell, Solar Plexus owned by Horace E. Dodge, Miss Tampa owned by D. P. Davis of Tampa, Rainbow III owned by Wagg and Bigelow of Palm Beach and a new boat recently completed for Forrest Adair, Jr., of Sarasota, named Sara De Sota.

Of course, the ten boats of the Biscayne Baby Class will compete on both days at the Miami Beach Regatta. It is highly probably there may be other boats completed for this class in sufficient time to race this winter.

Gar Wood is building two new boats to compete for the Fisher-Allison trophy, which with Webb Jay's Adieu should make excellent competition in the three fifty mile heats required by the Deed of Gift governing this trophy.

In the 151 inch class, besides the three California Champions which are expected, the fastest boats in this class from the Atlantic Coast and the Mississippi Valley are entered. These boats will compete in two six mile heats on each of the race days. Classes have also been arranged at Miami for the Sunshine Babies of St. Petersburg and perhaps the Tampa Babies of the Junior Gold Cup Class may compete also. In addition there will be classes for the Dodge Water Cars, Chriscrafts and Baby Gars. The grand wind-up on the final day of the Regatta will be an unlimited race open to all boats irrespective of power or size.

Of course, the Miami Regatta will be opened as usual, with the famous Chance Race which is open to boats of all description and powers. Classes have also been arranged for cruisers, including races for Elco Cruisettes and Matthews 38's. Outboard motor races are also to be held.

At the Tampa Regatta as mentioned above, the feature race will include several heats for the Tampa Babies of the Junior Gold Cup Class which are now building. In addition to this race, there will be classes for the St. Petersburg Sunshine Babies, 151 inch hydroplanes and a Free-For-All hydroplane race which will include such mile a minute boats as Bugs, owned by Henry Keith, Miss Sunshine, and Fore owned by Wm. Foreman of Chicago. The dates of the Tampa Regatta are March 5 and 6.

At Palm Beach on February 20 and 22, the annual regatta on Lake Worth will be held for the Royal Ponciana and Bradley Gold Cup Challenge trophies.

The Royal Ponciana cup is now held by C. E. Padgett of Quincy, Illinois, who won at last winter's Regatta with his hydroplane Miss Quincy VII. This owner will defend his title this year with a new Miss Quincy powered with a Universal motor. Competing for the Royal Ponciana trophy this year will be Little Star owned by W. M. Waugh, a new hydroplane owned by Selby, Steinmetz and Conover with one of the new Erd special engines, So Long owned by J. Harkless of Harvey, Illinois, Miss Washington owned by G. Beard, Greased Ligntnin' owned by Commodore William McP. Bigelow, Miss Quincy VII, owned by Chris Ripp of New York, Myda owned by Otto Stoye of New York and E-Nee-Mo owned by Joseph Clayton of New York.

MacMillan Tries Johnson Big Twin

Commander Donald B. MacMillan, the Arctic explorer, visited the Johnson Motor Company in South Bend, Indiana, late in November, and ran the new Johnson Big Twin 6 h. p. Outboard on the St. Joe River.

MacMillan had six Johnson Light Twins on his 1925 Arctic Expedition and praised them highly, telling of their satisfactory performance in towing his aeroplane and in hunting walrus. Upon learning of the new 6 h. p. motor, he wanted to investigate its performance himself.

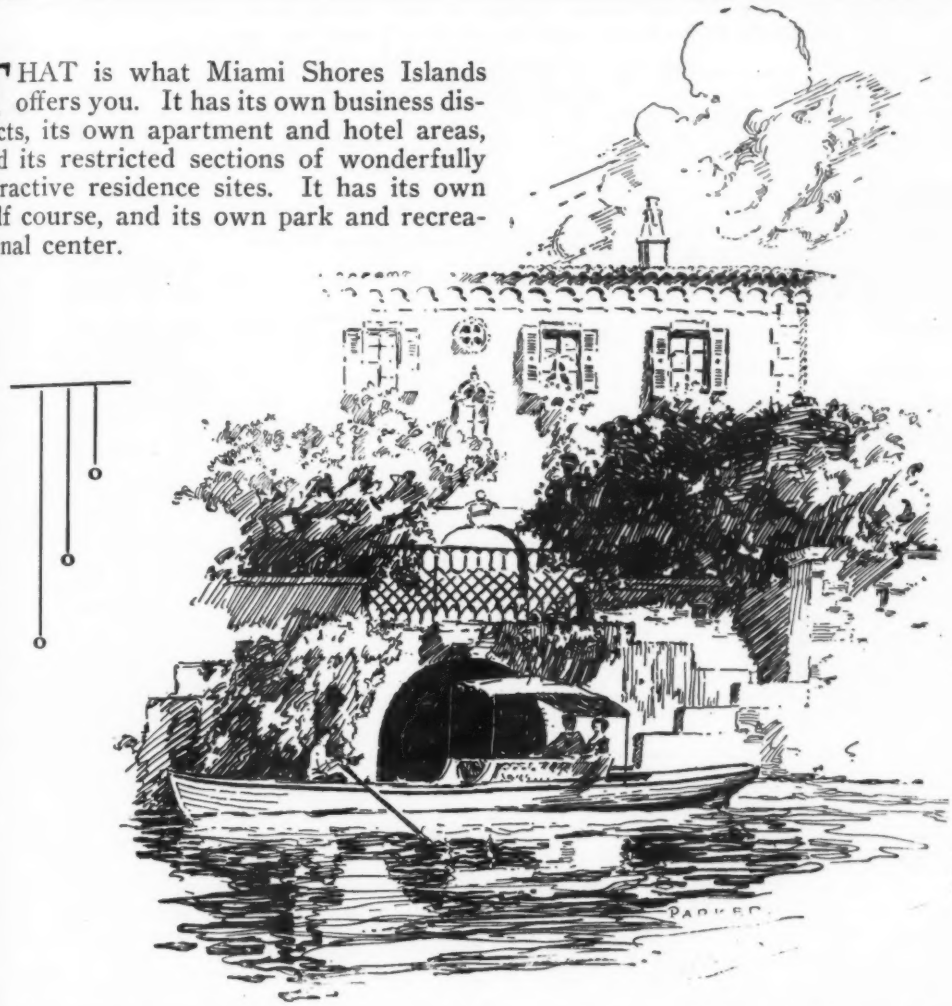
A trip with this motor on the St. Joe River amazed MacMillan. He was very enthusiastic over the power and speed of the Big Twin, declaring that it would handle most successfully his heavier whaling boats. "Its ease of handling is remarkable, and I would not have thought that such speed and power could be packed into so light and simple a unit," he declared. "When I return to the Arctic in June," he said, "I'll take several Big Twins, together with your smaller motors. They will be invaluable for heavy work.

"My conception of outboard motors has been greatly changed during the past year," said MacMillan as he stepped from the boat, "and after using your new motor I wonder if the ultimate has not beeen reached."

A Complete Community

—*out in the heart of Biscayne Bay*

THAT is what Miami Shores Islands offers you. It has its own business districts, its own apartment and hotel areas, and its restricted sections of wonderfully attractive residence sites. It has its own golf course, and its own park and recreational center.



FURTHERMORE—Miami Shores Island will be connected with the mainland by a great and beautiful causeway—100 feet wide—and also with Miami Beach, bringing all Miami Shores Island property within a few blocks of the ocean. The New Drive of the Campanili, which will pass southward over the Venetian Way, will make it possible for Miami Shores Island residents to drive right into the heart of Miami over beautiful boulevards stretching through the heart of Biscayne Bay.

Imagine what these great thoroughfares, unimpeded by cross traffic, will mean to the Miami Shores Island resident in easy accessibility to the business districts of Miami and Miami Beach, and in the delights of daily trips back and forth along the water's edge!

Write for full information.

125 EAST FLAGLER STREET

MIAMI SHORES

MIAMI FLORIDA

America's Mediterranean

MoToR BoatinG's Directory of 1926 Motor Boat Show Exhibitors

A Guide and Directory to the Show—A Complete List of All Exhibitors With Spaces Occupied and Names of Representatives in Charge

MoToR BoatinG will issue on or about February first a special number known as the Boat Builders' and Dealers' Supplement. This number will contain the complete story of the New York Motor Boat Show, description of all exhibits, etc. Should you desire a copy of this special issue of MoToR BoatinG, let us know, and we will gladly send you one.

Abercrombie & Fitch Co......New York, N. Y.
Space 51.....Otis L. Guernsey

Albany Boat Corporation.....Watervliet, N. Y.
Space 74.....L. L. Tripp

Alden, John G......Boston, Mass.
Space 51.....Dwight T. Simpson

American Machine & Foundry Co......Brooklyn, N. Y.
Space 60.....C. Q. Wright, Jr.

American Bosch Magneto Corporation Springfield, Mass.
Space 111.....L. B. Smith, C. F. Graesser

American Power Boat Association New York, N. Y.
Mezzanine ..F. R. Still, H. A. Jackson, W. D. Edenburn, M. Rosenfeld, Official Photographer

American Engineering Co......Philadelphia, Pa.
Space 38, 39.....H. Kempner

Ajax Wrench Corporation.....New York, N. Y.
Space 82.....S. E. Stone

American Gas Turbine Corp......New York, N. Y.
Space 7.....W. Harper, Jr

Banfield Sea Skiff Works.....Atlantic Highlands, N. J.
Space 235.....J. E. Banfield

Beckhard, Bruno.....Flushing, L. I.
Space 1, 2.....Bruno Beckhard

Beaver Manufacturing Co......Milwaukee, Wis.
Block L.....Curtis C. Stewart

Belle Isle Boat & Engine Co......Detroit, Mich.
Space 234.....E. M. Gregory, M. J. Hager

Bergh Boat Corporation, The.....New York, N. Y.
Block J.....John O. Bergh

Bosch Magneto Co. Inc., Robert.....New York, N. Y.
Space 107, 108, 109.....J. T. Lansing

Bowler, Holmes & Hecker Co. Inc......New York, N. Y.
Block K and L.....H. E. Holmes

Bridgeport Motor Co. Inc., The.....Bridgeport, Conn.
Block L.....H. H. Brautigam

Briggs Engineering Co. Inc......Brooklyn, N. Y.
Space 25.....Clarence N. Wheeler

Brooklyn Varnish Mfg. Co......Brooklyn, N. Y.
Block E and K.....Wm. Bruns, Arthur J. Utz
Space 27.....D. C. Anderson

Bruns, Kimball & Co......New York, N. Y.

Buda Company, The.....New York, N. Y.
Block J.....J. P. Mahoney, G. B. Wright

Butler, T. J......Kearny, N. J.
Space 4.....T. J. Butler, Jr., M. Geordano

Cady Company, C. N......Canastota, N. Y.
Block H.....C. P. Cady

Cape Cod Shipbuilding Corp......Wareham, Mass.
Block A-6.....Charles S. Gurney

Carpenter & Co., Geo. E......Chicago, Ill.
Space 43.....J. W. Sackrider

Coast & Geodetic Survey Office.....Washington, D. C.
Mezzanine

Columbia Boat Company, Inc......Mt. Vernon, N. Y.
Block B-4.....Chas. A. Ward

Columbian Bronze Corporation.....Freeport, L. I.
Space 101-102.....Robert B. Paterson

Commodore Marine Motor Co......New York, N. Y.
Space 12.....Kenneth McDowell

Consolidated Shipbuilding Corp......Morris Heights, N. Y.
Block A2 and A3..John J. Amory, W. J. Parsloy, Bruce Scrimgeour, J. S. Potter, W. K. Parslow, W. A. Roos, Wm. G. Wood.

Cross Gear & Engine Co......Detroit, Mich.
Space 72.....M. A. Cross

Cunningham, James Sons & Co......Rochester, N. Y.
Space 44.....J. C. Dyer

Dawn Boat & Shipbuilding Corp......Clason Point, N. Y.
Space 15.....Chris B. Nelson

Debevoise Company, The.....Brooklyn, N. Y.
Space 30.....Frank W. Tibbea

Detroit Marine Aero Engine Co......Detroit, Mich.
Block M.....Frank B. Sexton

Dodge Boat Works, Horace E......Detroit, Mich.
Block A-1.....Horace E. Dodge, Geo. F. Cronch, R. W. Walker

Domestic Electric Co. Inc......New York, N. Y.
Space 16.....H. P. Robinson

Durkee-Guinan Corporation.....New York, N. Y.
Space 32-33.....Fred H. Fricke

Du Bois Iron Works.....New York, N. Y.
Space 68.....Eugene A. Balsley

Edson Manufacturing Corp......Boston, Mass.
Space 56.....J. W. Wickwire

Eisemann Magneto Corp......New York, N. Y.
Space 49-50.....B. B. Woodford

Elco Works, The.....Bayonne, N. J.
Block A-8.....Irwin Chase, R. H. Kingsley

Electric Storage Battery Co., The.....Philadelphia, Pa.
Space 80.....Dewey L. Pierce

Elto Outboard Motor Co......Milwaukee, Wis.
Block C.....J. Stern

Enterprise Oil Company, Inc......Buffalo, N. Y.
Space 35.....H. H. Hower

Erd Motors Corporation.....Saginaw W. S., Mich.
Block J.....W. A. Carrell,

Evinrude Motor Company.....Milwaukee, Wis.
Block E.....H. Biersach, O. Mikkelsen

Fay & Bowen Engine Company.....Geneva, N. Y.
Block G1 and G2.....Sutter Brothers

Ferdinand & Company, L. W......Boston, Mass.
Space 70.....August Schlueter

Ford & Payne.....New York, N. Y.
Space 103.....Edward D. Payne

Frisbie Motor Co., The.....Middletown, Conn.
Block M.....M. S. Cornell

Gesswein Boat Company, Paul S......Brooklyn, N. Y.
Block J.....Elliott C. Kirkham

Gray Marine Motor Company.....Detroit, Mich.
Block K.....G. H. Nablo

Gray Boats.....Thomaston, Maine
Space 45.....Russell Gray

Greenpoint Basin & Construction Co......Greenpoint, L. I.
Space 73.....C. P. Brigham, J. W. Hussey

Hacker & Fermann, Inc......Detroit, Mich.
Block B-8.....J. Hacker, L. H. Thomson

Hacker Boat Company.....Detroit, Mich.
Block B-8.....J. Hacker

Hall-Scott Motor Car Company.....New York, N. Y.
Block B-2 and F-1.....S. C. Kyle

Hill Diesel Engine Company.....Lansing, Mich.
Space 86.....John A. Hense

Holt Engineering Corp......New York, N. Y.
Block H.....C. G. Taylor

Ireland & Matthews Manfg. Co......Detroit, Mich.
Space 69.....R. Weston Doherty

Jardine Company, Inc., Edward Fell.....Atlantic City, N. J.
Block A-7.....Edward Fell Jardine

Johnson Motor Company.....South Bend, Ind.
Block E.....Gates Harpel

Johnson Motor Products, Inc......New York, N. Y.
Block O.....H. Alex Johnson

Jule Motor Corp......Syracuse, N. Y.
Block D-1.....H. F. Hodgkins

Kahlenberg Bros. Co......Two Rivers, Wis.
Block C.....J. H. Curtis, A. L. Fairbanks

Kermath Manufacturing Co......Detroit, Mich.
Block K.....J. B. Farr

(*Continued on page* 346)

Maybach-Zeppelin

Boats and Engines

Powerplants by:
MAYBACH MOTOR CO.
Department of
Zeppelin Airship Co.
FRIEDRICHSHAFEN

"VIRGINIA LEE II."

A Maybach 50-ft. Deckhouse cruiser owned by G. A. Schacht, Esq., Cincinnati, Ohio.
Speed 18 miles per hour.

"TYROLEE"

60-ft. Twin screw trunk cabin cruiser. Owned by H. R. Tyroler, Esq., Cleveland, Ohio.
Speed 15½ miles per hour.

"FALCON"

30-ft. Single Screw Water Sedan. Owned by Mrs. W. Kinne, Lake Champlain.
Speed 22 miles per hour.

Prices Delivered in New York

48-Foot Single Screw Deckhouse Cruiser
$16,650

50-Foot Twin Screw Deckhouse Cruiser
$21,080

60-Foot Twin Screw Deckhouse Cruiser including Kohler Generating Set
$26,865

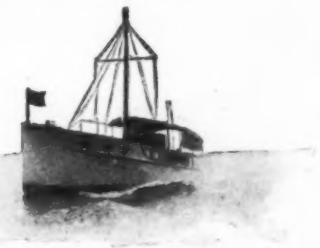
Maybach Motor Co.

F. W. von Meister
General Agent
253 West 57th Street
New York City
and
Hotel Alba
Palm Beach, Fla.

Hulls by:
FR. LUERSSEN
oldest and largest Motor Yacht Builder
VEGESACK

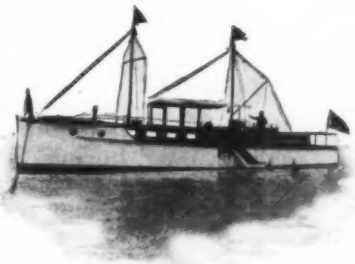
"DOROTHY Q"

41-ft. Twin screw Commuter. Owned by Gibson Paine, Esq., New York City.
Speed 27 miles per hour.



"FIAMETTA"

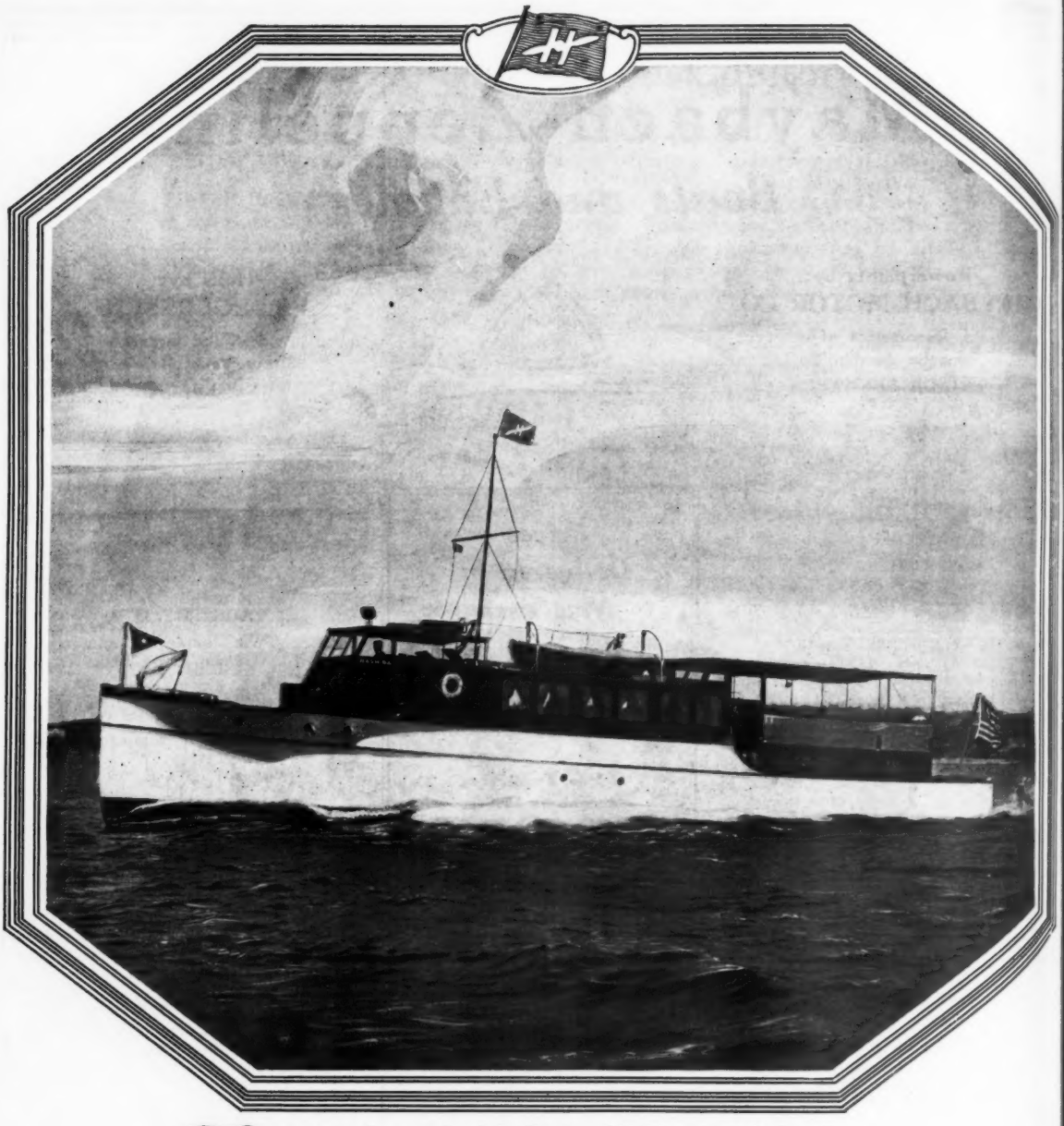
50-ft. Twin screw raised deck cruiser. Owned by Nelson S. Olmann, Esq., Palm Beach, Fla.
Speed 18 miles per hour.



"DAUNTLESS"

57-ft. Twin screw trunk cabin cruiser. Owned by James J. Newcombe, Esq., New Rochelle.
Speed 16 miles per hour.

All boats illustrated were built and powered by us—



ANOTHER fine yacht, Mr. Richard F. Hoyt's "Nashira", designed and built by Consolidated Shipbuilding Corporation, is powered with a pair of Wright Typhoon Engines. The 1100 H.P. thus produced gives this 81 ft. houseboat a turn of speed of 28 miles per hour.

The two 550 H.P. Typhoons weigh less than many marine engines of one-third their H.P. High power and low weight are controlling characteristics for speed in any type of yacht.

WRIGHT AERONAUTICAL CORPORATION
Paterson, N. J., U. S. A.

BULLETIN No. 10 with interesting general information and technical description of Wright Typhoon Engines, will be forwarded on request. Send for it.

WRIGHT TYPHOON MARINE ENGINE

America's Leading Marine ENGINE BUILDERS

An Alphabetical Catalog of All Sizes and Varities of Marine Engines Arranged for Easy Selection and Comparison

Outboard Motor Manufacturers are Completely Tabulated on page 302

BEAVER

Beaver Manufacturing Co.
35-25th Street, Milwaukee, Wis.

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carbureter
IE	55	4¾x6	4	4	1000	1175	Force feed	Joe's	Leece-Neville	Dual Bosch	Champion	Stromberg
ID	75	4¾x6	6	4	1000	1750	Force feed	Joe's	Leece-Neville	Dual Bosch	Champion	Stromberg
RB	92	6 x7	4	4	1000	1850	Force feed	Joe's	Leece-Neville	Dual Bosch	Champion	Stromberg
RE	150	6 x7	6	4	1000	2800	Force feed	Joe's	Leece-Neville	Dual Bosch	Champion	Stromberg
RY	180	6½x7	6	4	1000	3800	Force feed	Joe's	Leece-Neville	Dual Bosch	Champion	Stromberg
RX	105	6½x7	4	4	1000	2800	Force feed	Joe's	Leece-Neville	Dual Bosch	Champion	Stromberg

BRENNAN STANDARD

Brennan Motor Mfg. Co.
Syracuse, N. Y.

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	1500	600	Pressure	Own	Starting device	Ignition system	Spark plugs	Carbureter
					R. P.M.	Weight	Lubrication	Reverse gear				
M-4	20	4x5	4	4	1000	650	Pressure	Own	Bosch		Champion	Stromberg
M-4	30	4x5	4	4	1000	650	Pressure	Own	Bosch		Champion	Stromberg
D-4	35	4½x5	4	4	1000	800	Pressure	Own	Bosch	Atwater,	Champion	Stromberg
D-4	40	4½x5	4	4	1500	750	Pressure	Own	Bosch	Kent,	Champion	Stromberg
E-4	35	4½x5	4	4	1000	1000	Pressure	Own	Bosch	Bosch	Champion	Stromberg
E-4	50	4½x5	4	4	1800	800	Pressure	Own	Bosch	Magneto	Champion	Stromberg
D-6	75	4½x5	6	4	1800	1000	Pressure	Own	Bosch	or	Champion	Stromberg
6	60	4x5½	6	4	2300	900	Pressure	Own	Bosch	both	Champion	Stromberg
100	100	4⅜x5½	6	4	2000	900	Pressure	Own	Bosch		Champion	Stromberg
		5x6¼	6	4	2000	1500	Built in reduction gear, 2 and 3 to 1					
		5x6½	6	4	1500	1800	Built in reduction gear, 2 and 3 to 1					

LYCOMING

H. L. Brownback and Associates
17 Battery Place, New York, N. Y.

Horse Power	Bore and Stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting Device	Ignition System	Carbureter
42	4x5	4	4	1500	570	Pressure..	Planetary..	American Bosch	American Bosch	Schebler
59	3¼x4½	6	4	1800	690	Pressure..	Planetary..	American Bosch	American Bosch	or
68	3¼x4½	8	4	1800	790	Pressure..	Planetary..	American Bosch	American Bosch	Zenith
75	3 3/16x4½	8	4	1800	790	Pressure..	Planetary..	American Bosch	American Bosch	

The Buda Company
Harvey, Ill.

Model	Power	Stroke	Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse Gear	Starting Device	Ignition System	Spark Plugs	Carbureter
BM-6	50-80	4x5½	6	4	1600	975	Force Feed	Joes or Paragon	Bosch	Bosch	A.C.	Schebler or Zenith
GM-6	70-100	4½x6	6	4	1400	1375	Force Feed		Bosch	Bosch	A.C.	
HM-6	35-50	3½x4½	6	4	1800	—	Force Feed		Bosch	Bosch	A.C.	
DM-6	40-55	3½x5	6	4	1800	—	Force Feed		Bosch	Bosch	A.C.	

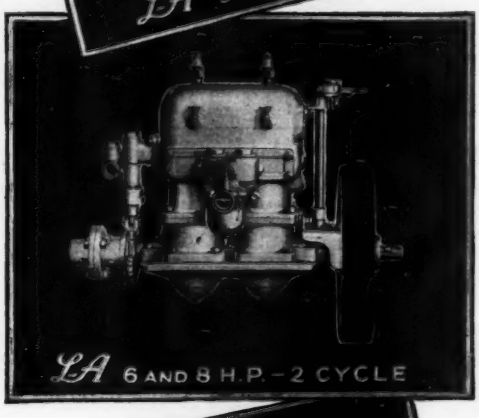
BUFFALO

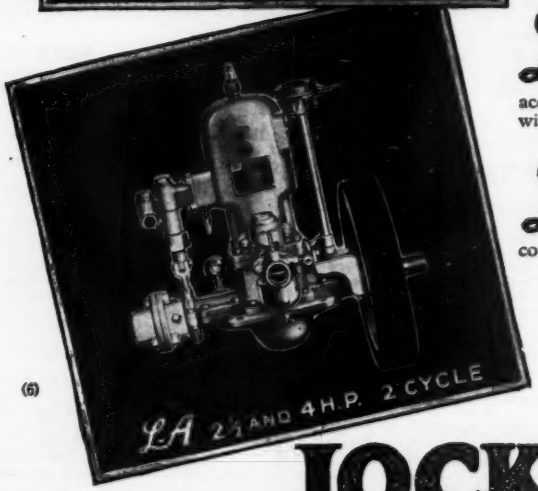
Buffalo Gasolene Motor Co.
1280-1290 Niagara Street, Buffalo, N. Y.

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carbureter
B.A.	30	3½x5	4	4	1600	690	Circul. Splash	Master	Bosch	Bosch Magneto	Champion	Zenith
S.	20	3¾x5	4	4	1000	A-560 I-710 A-745	Circul. Splash	Master	Leece-Neville	Bosch magneto	Champion	Schebler
M.Y.	30	4¾x5	4	4	1000	I-929	Circul. Splash	Master	Leece-Neville	Bosch magneto	Champion	Schebler
C.M.	60	5½x7	4	4	900	A-1430 I-1730	Pressure Feed Circulating	Master	Leece-Neville	Bosch magneto	Champion	Schebler
C.E.	80	6¾x9	4	4	800	A-2100 I-2600	Pressure Feed Circulating	Master	Leece-Neville	Bosch magneto	Champion	Schebler
P.P.	12	5x6½	2	4	400	1170	Manzel Mech. Oiler	Own	Leece-Neville	Bosch magneto	Champion	Schebler
J.	15	6x7½	2	4	350	1400	Manzel Mech. Oiler	Own	Leece-Neville	Bosch magneto	Champion	Schebler
K.	22	7x9	2	4	350	2100	Manzel Mech. Oiler	Own	Leece-Neville	Bosch magneto	Champion	Schebler
P.P.P.	24	5x6½	4	4	400	1960	Manzel Mech. Oiler	Own	Leece-Neville	Bosch magneto	Champion	Schebler
J.J.	30	6x7½	4	4	450	2525	Manzel Mech. Oiler	Own	Leece-Neville	Bosch magneto	Champion	Schebler
K.K.	45	7x9	4	4	450	3655	Manzel Mech. Oiler	Own	Leece-Neville	Bosch magneto	Champion	Schebler
M.K.K.	50	7½x9	4	4	450	3800	Manzel Mech. Oiler	Own	Leece-Neville	Bosch magneto	Champion	Schebler
S.K.K.	70	7x9	6	4	450	4850	Manzel Mech. Oiler	Own	Leece-Neville	Bosch magneto	Champion	Schebler
M.K.K.K.	80	7½x9	6	4	450	5100	Manzel Mech. Oiler	Own	Leece-Neville	Bosch magneto	Champion	Schebler
W.	100	10x12	4	4	300	8200	Manzel Mech. Oiler	Own	Leece-Neville or air starter	Bosch magneto	Champion	Schebler
W.W.	150	10x12	6	4	300	12,800	Manzel Mech. Oiler	Own	Leece-Neville or air starter	Bosch magneto	Champion	Schebler
R.	200	5½x7	6	4	1400	A-2035 1-2600	Pressure Feed Circulating	Master	Leece-Neville	Bosch magneto	Champion	Two Stromberg

(*Continued on page* 174)

L-A MARINE MOTORS for 12 ft. to 30 ft. Boats





Backed by 22 Years of Sound Engineering and Reliable Building

Lockwood-Ash Motors are easy to operate, easy to maintain and have a reputation for exceptional dependability on the water. This year the L-A line of Inboard Motors includes three sturdy models in a range of five different horsepowers from 2½ H. P. to 8 H. P.

L-A 5 H. P.—Single Cylinder—4-Cycle
For Boats 16 ft. to 24 ft.

Our biggest seller—a thoroughly well-built, well-designed and well-finished Motor at a moderate price. Exceptionally free from vibration—low in fuel consumption—only 4/5 of a pint of gasoline per horsepower hour.

Uses Ford Parts

Replacements, if needed, may be had in an emergency, from any Ford Service Station, as well as from our own service department.

Equipped with Bosch Magneto, with impulse coupling, or may be had with battery equipment, if desired. Weight about 165 lbs.

L-A 6 H. P.—2-Cylinder—2-Cycle
For 15 ft. to 24 ft. Craft

Smooth-running, easy-starting, powerful, silent, clean, pleasing in appearance, equipped with battery ignition or may be had with Bosch Magneto and impulse coupling, if desired. Weight 160 lbs.

L-A 8 H. P.—2-Cylinder—2-Cycle
For 20 ft. to 30 ft. Craft

Same general description as the L-A 6 H. P., but half-inch larger cylinder bore and heavier construction throughout. Weight 210 lbs.

L-A 2½ H. P.—Single Cylinder—2-Cycle
For 12 ft. to 18 ft. Craft

Ideal for inland lakes and rivers. Simple—sturdy—easy-starting, compact, easily maintained. Working parts easily accessible. Equipped with Battery Ignition, or if preferred, may be had with Bosch Magneto and impulse coupling. Weight 110 lbs.

L-A 4 H. P.—Single Cylinder—2-Cycle
For 16 ft. to 22 ft. Craft

Same general description as the L-A 2½ H.P., but ¾ inch larger cylinder bore, ½ inch longer stroke, and of heavier construction throughout. Weight 135 lbs.

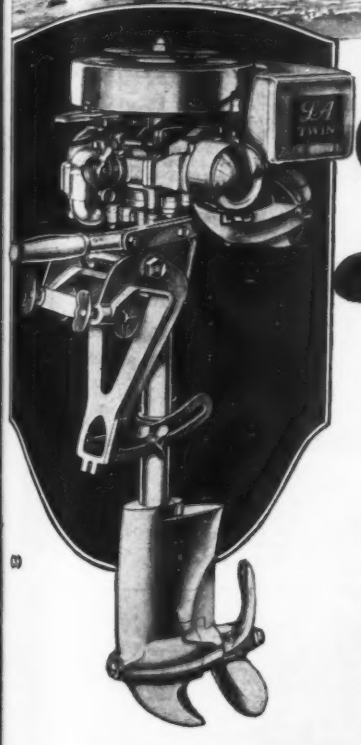
Write for Catalog Folders describing all models and giving installing dimensions

Lockwood-Ash Distributors are located in principal sea and lake ports. Write for names of ones nearest you.

Propellers, shafting, and other boat equipment available—both salt and fresh water, also reverse gears.

LOCKWOOD-ASH
—MOTOR— LA —COMPANY—
61 Jackson Street Jackson, Michigan

Advertising Index will be found on page 384



LA NEW! TWIN
Motor for Rowboats

SENSATIONAL SURPRISE of the year — Climax of 22 years' marine engine building experience, offering advanced features which upset many previous ideas of Rowboat Motors.

Power — Speed — Control

Light Weight and Performance

NEW—Phenomenal Power
—At normal speed develops 3.85 H. P. (Brake Test). In racing trim develops 4.65 H. P. (Brake Test).

NEW—Startling Speed
—In actual measured test made 14.28 miles per hour on a 14 ft. modified V-Bottom Boat with 145 lb. operator.

NEW—Low Weight per Horsepower
—Weighs only 14.29 lbs. per Brake Horsepower.

NEW—Underwater Stream-Line Design
—Cuts the water "like a knife."

NEW—Giant Drive Propeller
—Doesn't churn the water; uses all the power to push boat.

NEW—Combination Steering
—Without a Rudder.

NEW—Safety Propeller
—Protects Boat, Boaters and Motor

NEW—Super-charged Water Pump
—Insures a cool motor always at all speeds and reverse.

NEW—Unit Control Carburetor
—One easy adjustment for all speeds and weather.

NEW—"Top-Spin" Easy Starter with big Eiseman Magneto
—Gets you away in a flash.

NEW—Combination Racing and Trolling Control
—One throttle lever for all speeds.

NEW—Lifetime Guarantee
—Against all defects in material and workmanship.

NEW—Five-Days' Trial Offer
—Gives you a chance to match with any other Motor.

Write for Free Catalog Folder Today

FREE!
On Request
Illustrated Catalog Folder of the New LA Twin Motor for Rowboats

LOCKWOOD-ASH
—MOTOR— LA —COMPANY—
61 Jackson Street Jackson, Michigan

NAVAL ARCHITECTS
ENGINEERS
YACHT BROKERS
MARINE INSURANCE

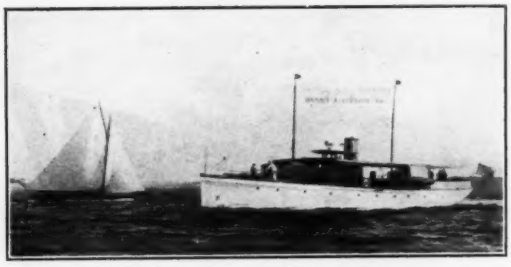
HENRY J. GIELOW, Inc.

25 West 43rd STREET NEW YORK

Tel.: Murray Hill 9134
Cable Address:
Crogie, New York
A.B.C. Code

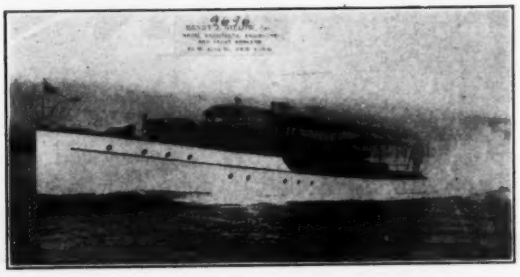
Plans and specifications for new yachts of any size or type should be prepared now to assure delivery for next year. Have plans of new yachts, all types, on file now.

We have a most complete and up-to-date list of steam and motor yachts of all sizes, sail, auxiliary, and houseboats, on file in our office, kept constantly up-to-date by thorough and comprehensive canvass of the entire yachting field from time to time. We are in a position to submit full information on any type of boat upon request.

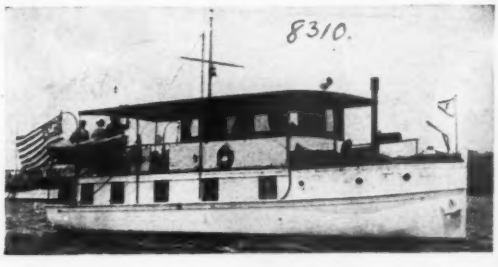


No. 7806—For Sale—Handsome twin-screw, 90', sea-going power yacht. Two 6-cylinder Winton motors; Winton 5 K.W. electric generator. Large deck house, containing dining saloon and galley. Two double and two single staterooms. Bathroom and two toilet rooms. All in finest condition. Henry J. Gielow, Inc., 25 West 43rd St., New York City.

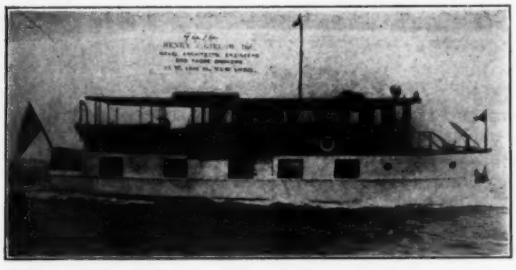
No. 9425—For Sale—Handsome new 84-foot houseboat offered, as owner building new larger boat. Last word in build, finish, appointments, very complete. Twin 6 Speedway motors give twelve miles. Three double, single, and maid's room, three baths, crew bath. Deck house, 25 feet. Opportunity get new highest class craft. Henry J. Gielow, Inc., 25 W. 43d St.



No. 9696—For Sale—Handsome, fast, twin-screw, Speedway motor yacht, desirable for Florida, 45'x15'x3'9"; speed, 16-18 miles. Four staterooms, two baths, deck dining saloon. Built 1924, finest finish and appointments. Enclosed bridge deck. Consistent fast cruiser, good sea boat. Henry J. Gielow, Inc., 25 W. 43d St.

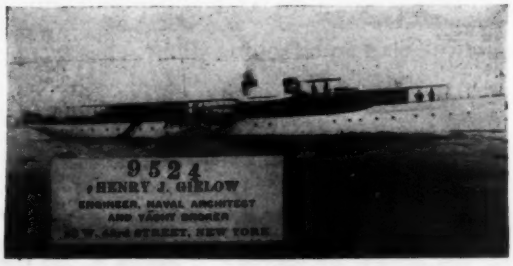


No. 8310—For Sale—Most desirable houseboat of size. Exceptional accommodations, double and single stateroom and saloon; sleeps 4-5; also deck saloon and bath. 45'x13'3"x3', strong construction, good finish. Good crew quarters and galley. Hot water, screens, complete equipment, Delco plant. Sixty H.P. motor, actual speed 9 miles. Immediate delivery.

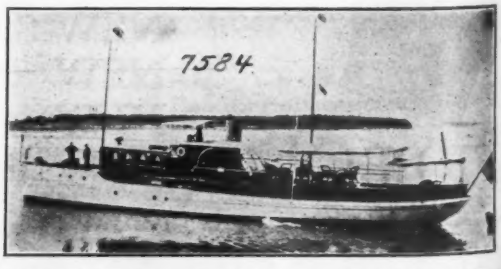


No. 9414—For Sale—Charter—57-foot houseboat, new 1925, offered, as owner building larger of same type. All ready in Florida, fully furnished and equipped. Standard motor, speed actual ten miles, draught 3'6", able and economical. Three staterooms, saloon sleep seven. Bath, 3 toilets. Splendid family boat, with every comfort and convenience. Henry J. Gielow, Inc., 25 W. 43d St.

No. 7737—For Sale—Handsome, fast cruiser, good beam, light draught for Florida. Modern every detail and complete. Twin Speedway motors; speed, 16-20 miles. Three staterooms, deck saloons, hot water heated. All finest condition. Henry J. Gielow, Inc., 25 W. 43d St.

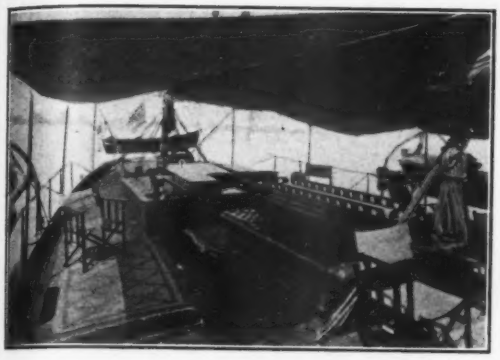


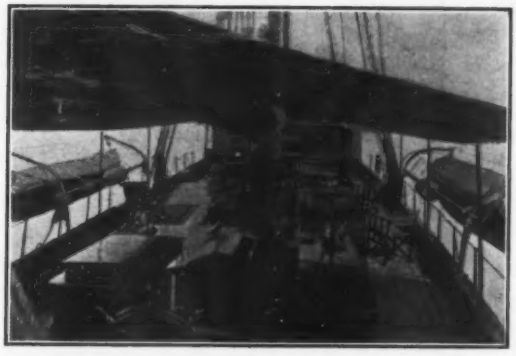
No. 9524—For Sale—Handsomest and finest appointed twin-screw oil burning fast steam yacht available. Beam, 18 ft.; speed, 16-18 knots. Built by Lawley & Son, engines and boilers same make. Two double, four single rooms, 4 baths. Two deck houses provide dining, music and smoking saloons. Henry J. Gielow, Inc., 25 W. 43d St.

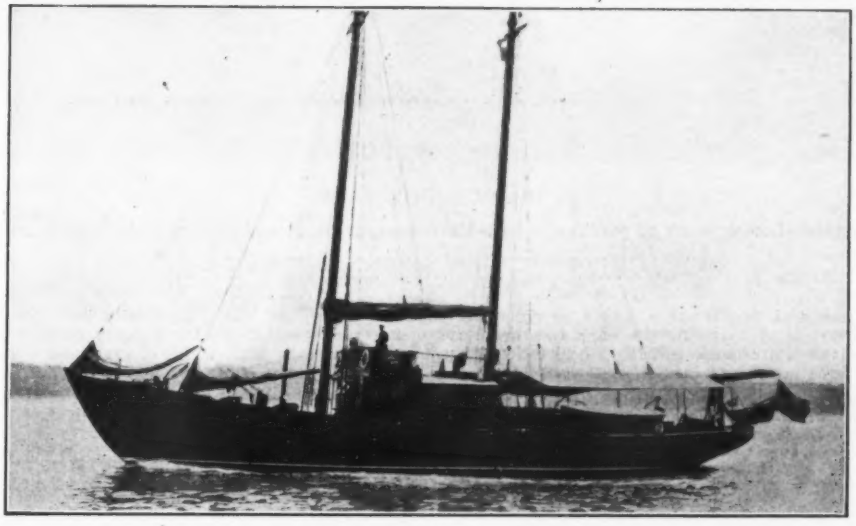


No. 7584—For Charter or Sale—In commission Florida. Desirable 100'x17'x5' power yacht, has largest accommodations any yacht of size. Double and single stateroom and bath forward; saloon, three single rooms and bath aft. Sleeps total 9-11. Two 6-cylinder 20th Century motors, new 1923. All new furnishings. Very able, large deck room and complete all details. Deck galley Speed, 12-15 miles, and economical with six crew.

NAVAL ARCHITECTS GIELOW YACHT BROKERS







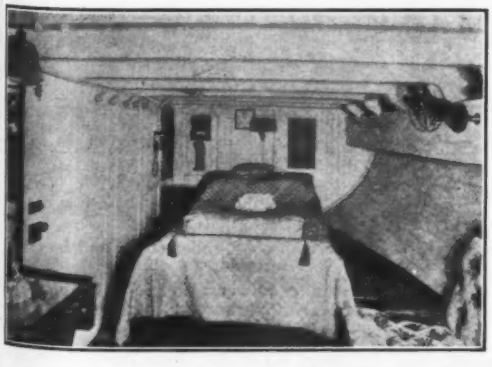
No. 9124—For Sale—Fisherman Model Auxiliary Schooner. This desirable auxiliary schooner is offered for sale at an attractive price, owner now building a new Diesel Yacht from our designs. The yacht was designed for off-shore cruising, very heavily constructed, all materials used are of the best. Frames white oak, 10"x10"; planking, 2¾". Underbody copper sheathed.

The accommodations are most liberal, providing large owner's stateroom, two single staterooms, bathroom and toilet room. Large deckhouse used as dining room and lounge.

The yacht is powered with a 170 h.p. Bessemer Diesel Motor, which gives her a speed of 10 miles per hour, with cruising radius at this speed of 2,600 miles. Hot water heated throughout, also mechanical refrigeration system.

This is an exceptional buy for the yachtsman who desires a real sea-going off-shore yacht. Hull and all equipment in perfect condition.

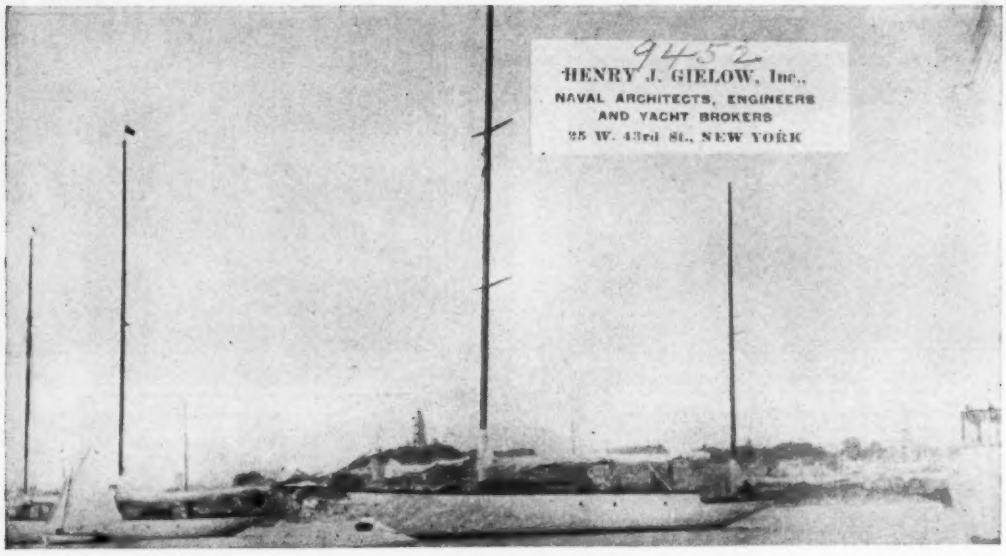
BIG BARGAIN



Prices and further information from HENRY J. GIELOW, Inc., 25 West 43rd St., New York

Telephone: Murray Hill 9134 Cable Address: Crogie, New York, A.B.C. Code

NAVAL ARCHITECTS GIELOW YACHT BROKERS



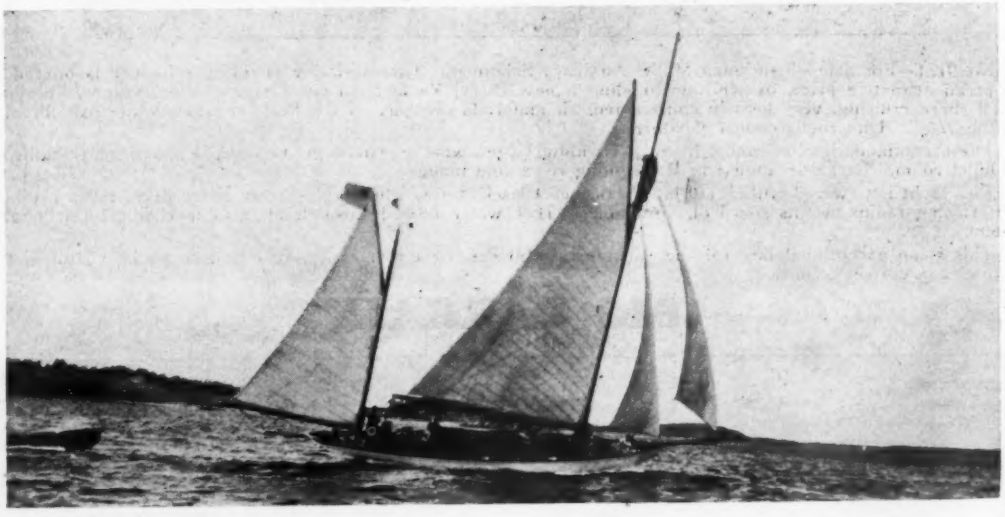
NO. 9452—FOR SALE.

An exceptional opportunity to purchase a new Marconi rigged keel and centerboard cruising auxiliary yawl.

Length	65 ft. 3 in.
Beam	15 ft. 10 in.
Draft	7 ft. 0 in.

The raised deck construction makes an unusually roomy craft of her size. Especially built for the present owner with a view of obtaining the most comfortable cruising accommodations for a party of four. There are two comfortable staterooms with bath and toilet, large main cabin, galley full width of craft and crew's quarters for two or three men.

The motor is a 35-55 h.p. Sterling located forward with self starter. Speed under power 7-8 miles. Delivered to owner late in 1924. Never in commission, as owner unable to use Summer 1925. Now retiring from yachting and offered for sale at price less than cost.



NO. 8448—FOR SALE.

Very attractive Crowninshield designed cruising auxiliary yawl, 61 ft. 8 in. x 14 ft. x 8 ft. draft.

Has two single staterooms, large main saloon containing two berths and two transoms, toilet room and large galley.

Powered with a heavy duty motor new 1921, giving yacht speed of 8 miles under power. Full suit of sails in good condition. Owner very anxious to sell and has named extremely low price, which we consider an exceptional buy at the price for a boat of this type and size.

Prices and further information from HENRY J. GIELOW, Inc., 25 West 43rd St., New York

Telephone: Murray Hill 9134 Cable Address: Crogie, New York, A. B. C. Code

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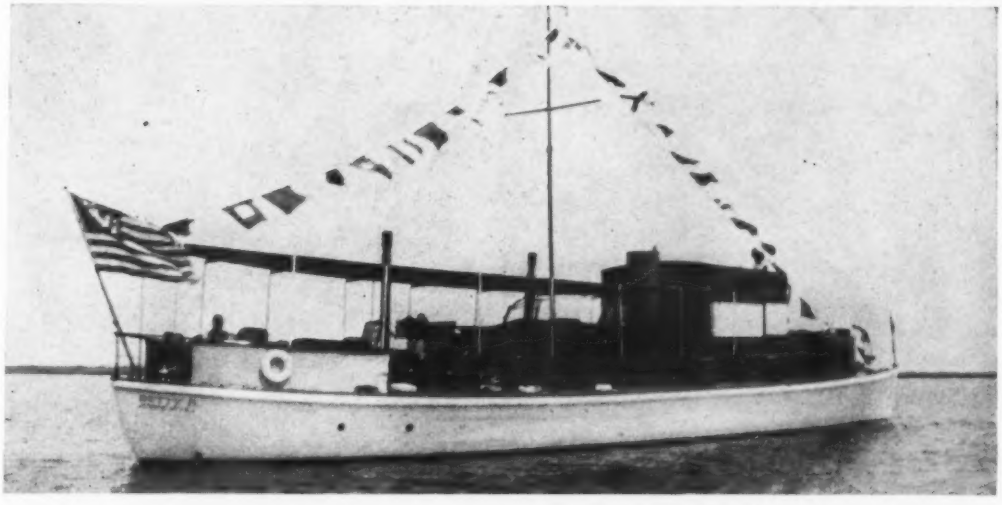
NAVAL ARCHITECTS GIELOW YACHT BROKERS



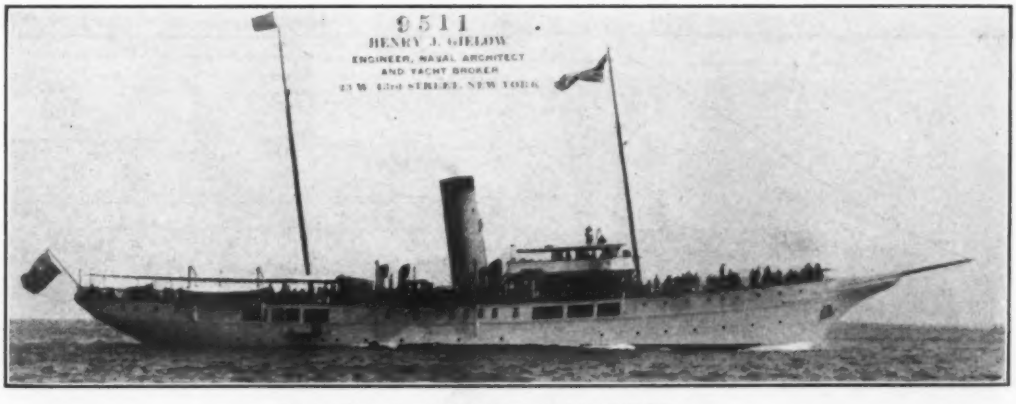
NO. 7053—FOR SALE.

A most desirable and comfortable trunk cabin cruiser. Length 85 ft., beam 14 ft., draft 4 ft. 2 in. Construction is of the best, all interior finish is of selected mahogany.

Owner's stateroom on deck, large guest stateroom below. Large dining saloon with 3 spring transoms. Cabin forward in sunken deck house with 2 pullman berths giving comfortable sleeping accommodations for 5 to 7 people. Bathroom and separate toilet room.

Two Lathrop motors new 1923, thoroughly overhauled 1925. Speed 11 to 12 miles. Delco Electric Light Plant. Hot water heated. Thoroughly overhauled and all furnishings and fittings new 1925.

THE FINEST SEA-GOING CRAFT AFLOAT



NO. 9511—FOR SALE OR CHARTER

Steel, twin screw oil burning steam yacht classed at Loyds 100 A-1, 1925.

Length	218 ft. 0 in.
Beam	32 ft. 2 in.
Draft	12 ft. 0 in.

The accommodations are most commodious.

On the main deck is owner's stateroom, sitting room and bathroom, also two guest staterooms, two bathrooms, large dining room, drawing room and library, with ample quarters for personal servants. Upper deck flush full length and width of craft has large smoking room and captain's quarters.

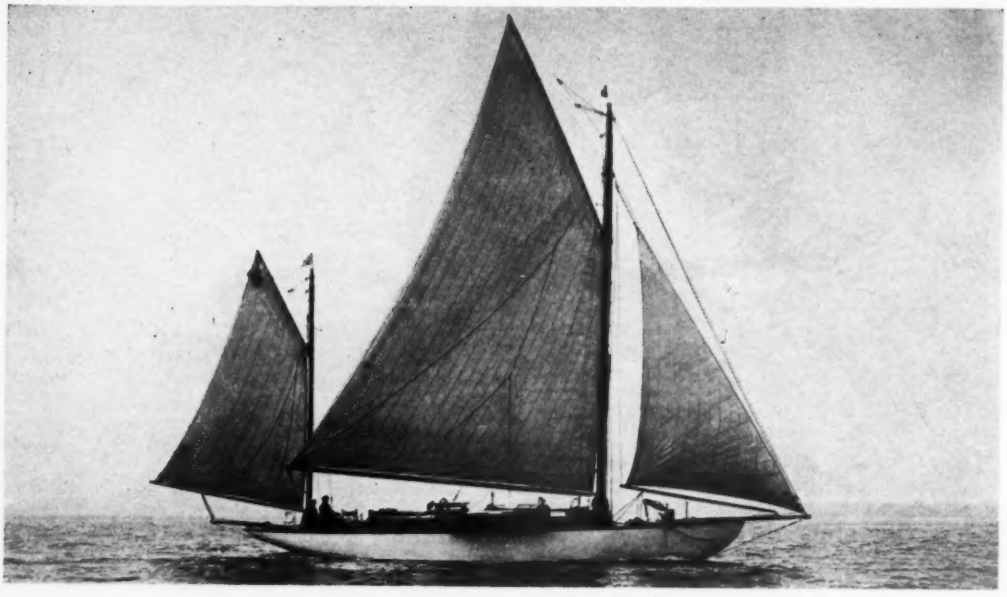
The main engines and all auxiliary equipment thoroughly overhauled fall 1925. There is also large refrigerating machine, and cold storage space. The bunker capacity is 300 tons of oil which gives cruising radius of from 6000 to 7000 miles. Luxuriously fitted and furnished.

The yachtsman who desires ocean cruising the opportunity is afforded in this sea-going craft.

Prices and further information from HENRY J. GIELOW, Inc., 25 West 43rd St., New York

Telephone: Murray Hill 9134 Cable Address: Crogie, New York, A. B. C. Code

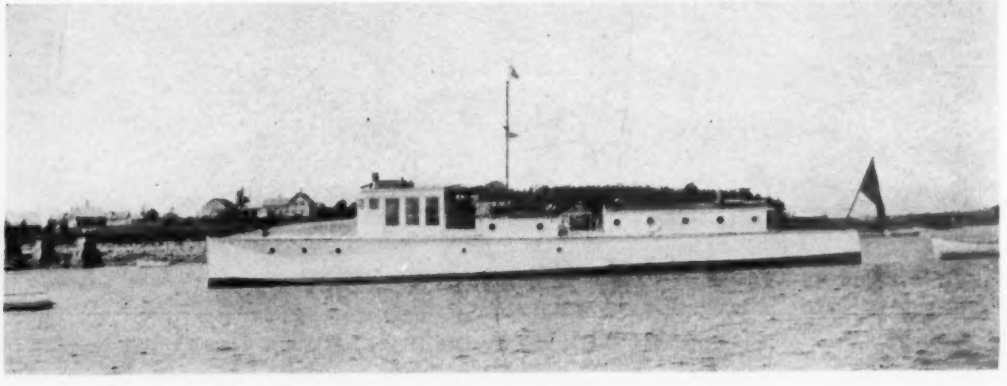
NAVAL ARCHITECTS GIELOW YACHT BROKERS



NO. 8453—FOR SALE—SHOAL DRAFT AUXILIARY YAWL.

Length	55 ft. 0 in.
Beam	15 ft. 0 in.
Draft	2 ft. 8 in.

A fine, able cruising yacht for any waters, but particularly adapted for waters where a light draft yacht is required. Comfortable sleeping accommodations for seven. Large cockpit. Lathrop 30 h.p. motor, Delco lighting plant. Protane Gas range and large refrigerator in galley, new 1925. Sails in excellent condition. Hull thoroughly overhauled Fall 1925, which permits placing boat in commission in Spring at minimum cost.



NO. 7168—FOR SALE.

At a reasonable price this attractive 60 ft. twin screw power cruiser.

There is a large Owner's double Stateroom, with main cabin arranged with two transom berths giving comfortable sleeping accommodations for four persons, large toilet room, galley, etc. Motors new 1921, giving boat speed 10 miles.

The craft is so constructed that anyone desiring boat to convert into an express cruiser at a reasonable cost the opportunity is afforded in this cruiser.

The boat and all equipment is in excellent condition. Fully found.

Prices and further Information from HENRY J. GIELOW, Inc., 25 West 43rd St., New York

Telephone: Murray Hill 9134 Cable Address: Crogie, New York, A. B. C. Code

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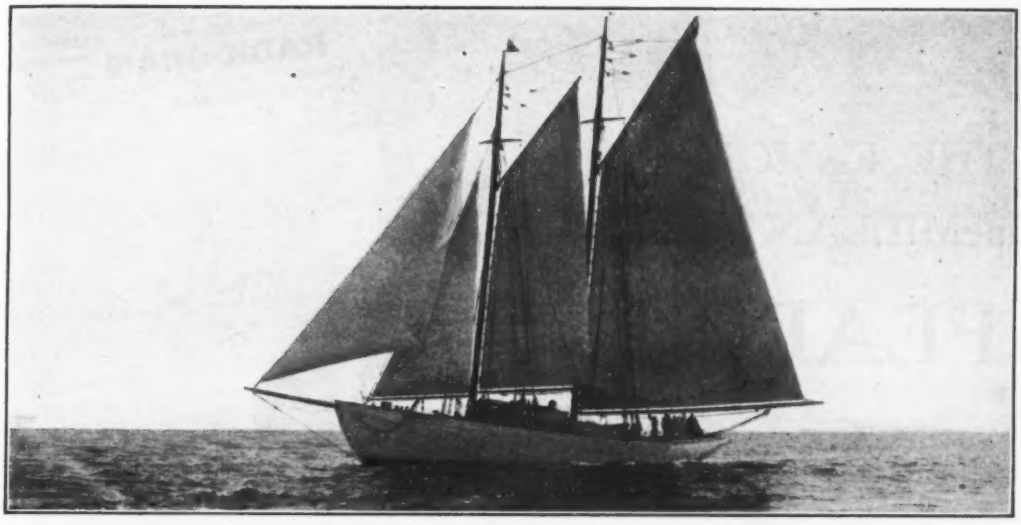
NAVAL ARCHITECTS GIELOW YACHT BROKERS

No. 9266—FOR SALE



A new sea-going auxiliary schooner from plans by Wm. H. Hand, Jr. Length O. A. 106', Beam 22'6", L. W. L. 85', Draft 13'.

ACCOMMODATIONS in white and mahogany include two double and two single staterooms aft of main saloon, a deck house, lounging and dining-room, stateroom for captain and forecastle for eight men.

CONSTRUCTION of heavy ship type with bottom copper sheathed for southern cruising.

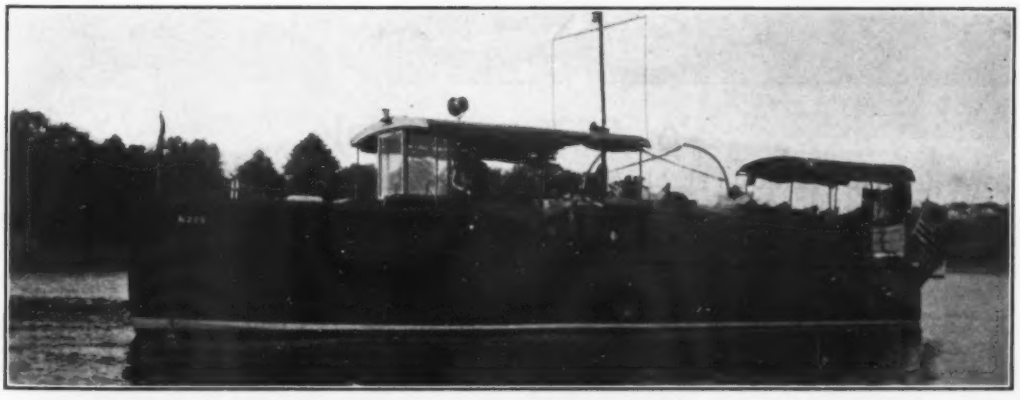
ENGINE—Atlas Imperial Diesel, rated 110 H. P., which drives the vessel about 8.5 miles. Cruising radius under power alone about 4,500 miles. Winton 7½ K. W. generator, Hyde electric windlass, electric and power bilge pump, electric air compressor and all usual and essential auxiliaries, also launch and small boats.

FITTINGS, furnishings and equipment of best grade.

This vessel is offered at considerably less than cost for immediate sale.

May be inspected at George Lawley & Sons Corporation, Neponset, Mass.

No. 7362—FOR SALE



A most desirable 40 ft. bridge deck cruiser.

Owner has just purchased larger boat and is most anxious to dispose of same. There is a large owner's stateroom forward, with large main cabin containing four berths, giving excellent sleeping quarters for six persons. Large toilet room, galley, etc.

The craft is powered with an 85 H.P. motor which gives her a speed of from 12-14 miles per hour.

Boat and equipment are in perfect condition, and at the price asked is an exceptional buy at the present time.

Prices and further information from HENRY J. GIELOW, Inc., 25 West 43rd St., New York

Telephone: Murray Hill 9134 Cable Address: Crogie, New York, A. B. C. Code

NAVAL ARCHITECTS GIELOW YACHT BROKERS

THE FAMOUS
MacMILLAN SHIP
PEARY

THE AMERICAN RADIO RELAY LEAGUE
HARTFORD, CONN.
RADIOGRAM
Received
RADIO STATION WTR
Arlington Heights, N.
PHONE
No. | FROM STA. | LOCATED AT | DATE | TIME | CHECK | OPERATOR
REF | | 48°N. Lat. 69° W. Long. | 10-25-25 | | | Gustafson
FROM MAC MILLAN ARCTIC EXPEDITION DATE 10-25-25 VIA WTR
TO
MR. JOSEPH A MAC DONALD,
C/O HENRY J. GIELOW, INC.,
25 WEST 43RD ST.,
NEW YORK CITY, N. Y.
AS THIS 1925 ARCTIC EXPEDITION WEARS ITS END I WANT TO EXTEND TO YOU A VOTE
OF SINCERE THANKS FOR HAVING FOUND FOR ME THE SS. PEARY MY SHIP HAVE GONE
INTO AND Come OUT OF THE ARCTIC THIS YEAR IN THE GREATEST COMFORT AND LUXURY
EVER EXPERIENCED BY ARCTIC EXPLORERS BEFORE I COULD NEVER HAVE GOTTEN
THRU THE ICE OF MELVILLE BAY IN THE TIME WHICH I DID WITH MY LITTLE SCHOOL
HAD IT NOT BEEN FOR THE DYNAMIC ICEBREAKING QUALITIES OF THE PEARY SHE HAS
JUST COME THRU ONE OF THE WORST STORMS OF THE NORTH ATLANTIC AND THE STRAITS
OF BELLE ISLE AND SHE THERE PROVED HER YOUTHFUL SEAWORTHINESS IN SPITE OF
THE FACT THAT HER HURRICANE DECK WAS LOADED WITH THREE AMPHIBIAN AEROPLANES
AND TWO MOTOR LIGHT ON DECK. SHE IS A REAL SHIP AND I THANK YOU
DONALD B. MAC MILLAN
Sent
No. | TO STA. | LOCATED AT | DATE | TIME | CHECK | OPERATOR
NOTICE TO ADDRESSEE: The station delivering you this message will be pleased to forward your reply without charge.
ZENITH RADIO CORP. 310 So. Michigan Ave., Chicago, Ill

Copyright National Geographic Society

No. 9726—For Sale

This famous steel steam screw yacht extra strongly constructed with A-1 Lloyd's rating.

Length	143 Ft. 0 In.
Beam	22 Ft. 6 In.
Draft	13 Ft. 0 In.

Cruising speed 10 miles, steaming radius 3200 miles. Ten staterooms for owner and guests, two baths and four toilet rooms. Large Dining Saloon, Social Hall, electric lighted and steam heated throughout, with extra large provision and cold storage space. Wireless room. A real ocean going vessel. Just returned from three months' voyage in the arctics on exploration trip.

Prices and further information from HENRY J. GIELOW, Inc., 25 West 43rd St., New York
Telephone: Murray Hill 9134 Cable Address: Crogie, New York, A. B. C. Code

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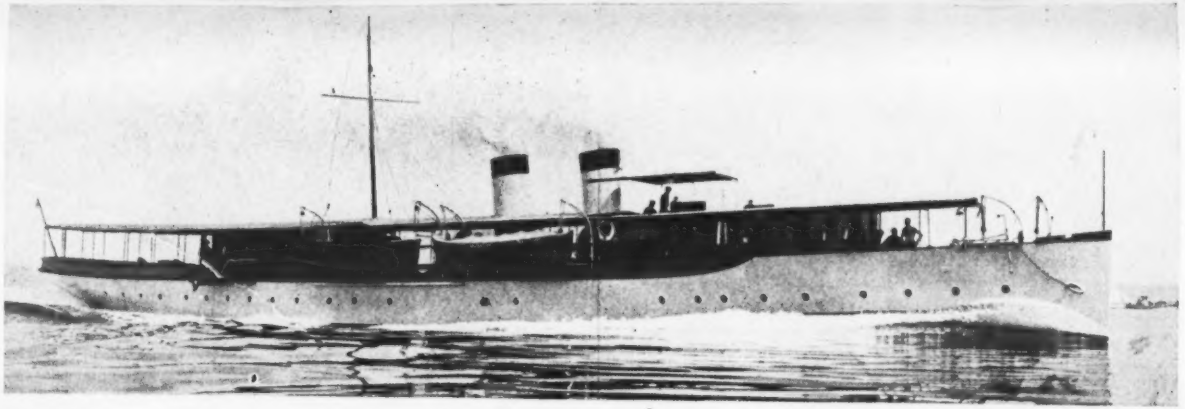
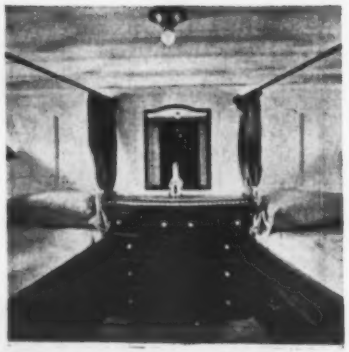


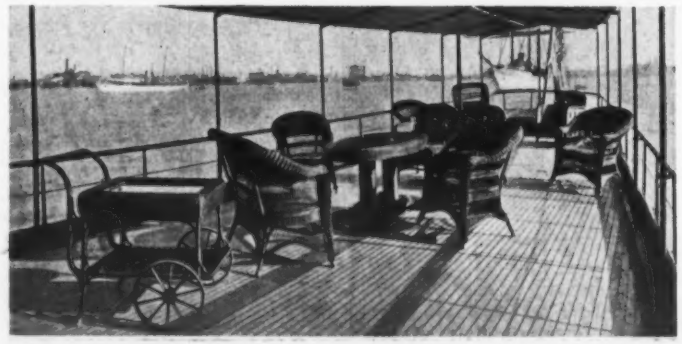
So exceptional is this yacht offering that it will no doubt belong to the first one that inspects it. Thoroughly equipped and furnished—even to the linen and silver—this Lawley-built boat is 165 feet in length, has a speed up to 20 miles per hour and with a safe cruising speed of 15 miles. This yacht is not only palatial in its appointments, but is designed to require a minimum crew. It is equipped with two triple-expansion oil-burning engines and has a fuel capacity sufficient for an extended cruise at moderate speed. Study the illustrations. It is in the finest condition throughout and will be sold at a price that will make the offer irresistible.

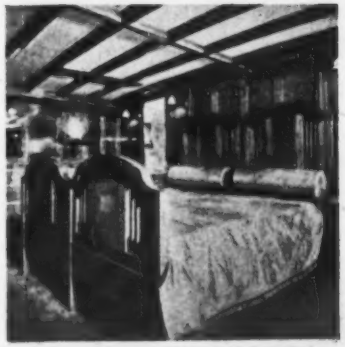
Write, wire or phone for complete plans and specifications.

HENRY J. GIELOW, Inc., 25 West 43rd Street, New York

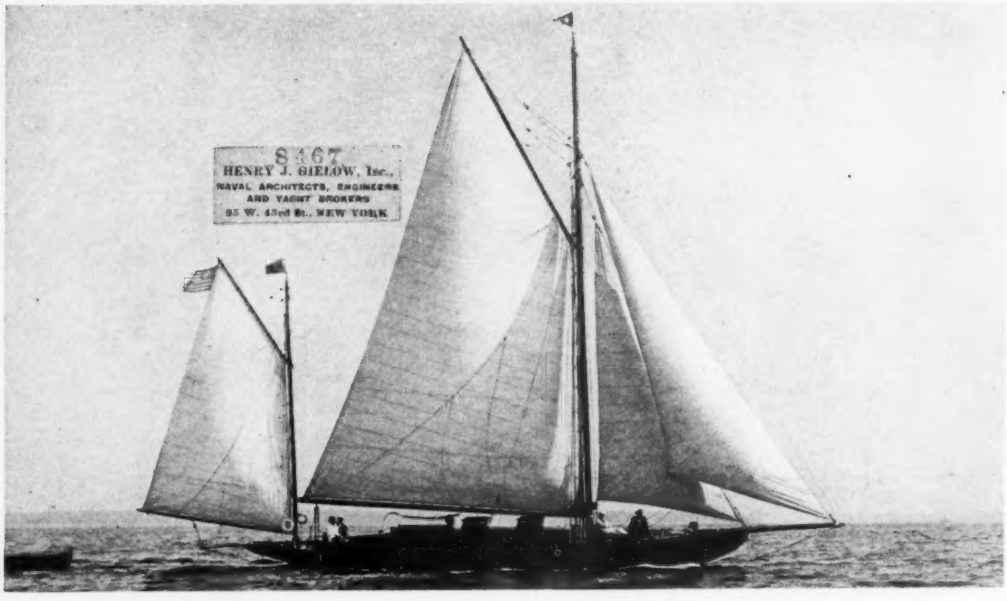
Telephone: Murray Hill 9134. Cable Address: Crogie, New York, A. B. C. Code







NAVAL ARCHITECTS GIELOW YACHT BROKERS



NO 8467—FOR SALE

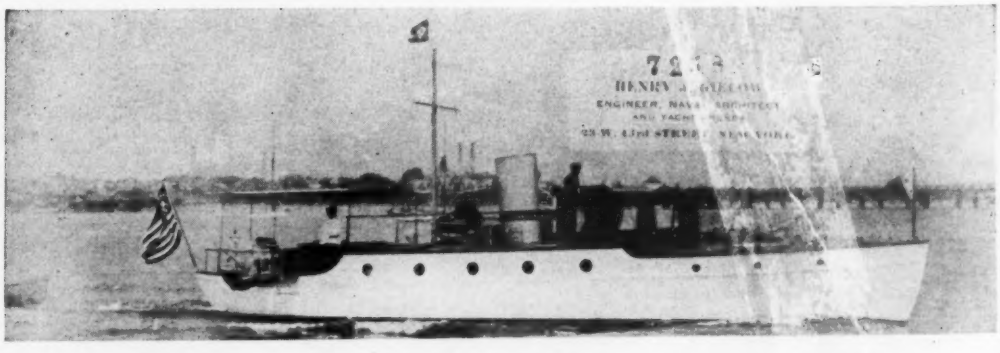
At a reasonable price this most desirable cruising Crowinshield designed auxiliary yawl.

Length	52 ft. 7 in.
Beam	12 ft. 4 in.
Draft	7 ft. 9 in.

Accommodations for owner and guests are single stateroom, large main saloon with two built in berths and two transoms giving comfortable sleeping quarters for five. Toilet room and large galley.

Powered with heavy duty motor new 1922, speed 6 miles.

Complete suit sails new 1922 and in very fine condition, as well as all rigging. Furnishings and fittings new 1924.



NO. 7258—FOR SALE.

54 ft. 6 in. heavily constructed raised deck cruiser. Has large double stateroom for owner, bathroom, fine roomy main cabin containing two comfortable transom berths, also deck house providing sleeping quarters for two persons. Large roomy galley.

Powered with a heavy duty reliable motor, speed 10 to 12 miles.

Boat and all equipment is in fine condition.

Price is reasonable.

Prices and further information from HENRY J. GIELOW, Inc., 25 West 43rd St., New York

Telephone: Murray Hill 9134 Cable Address: Crogie, New York, A. B. C. Code

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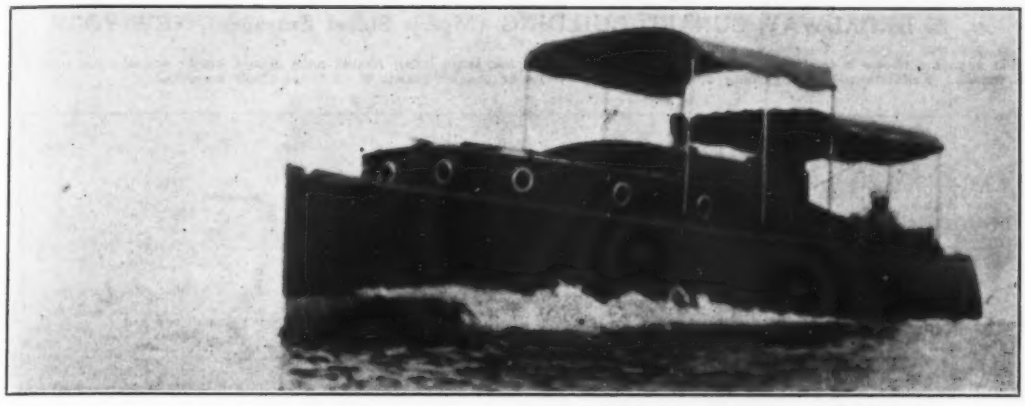
NAVAL ARCHITECTS GIELOW YACHT BROKERS



No. 9413—FOR SALE

A wonderful opportunity to buy this 30-foot trunk Cabin Cruiser at an attractive price.

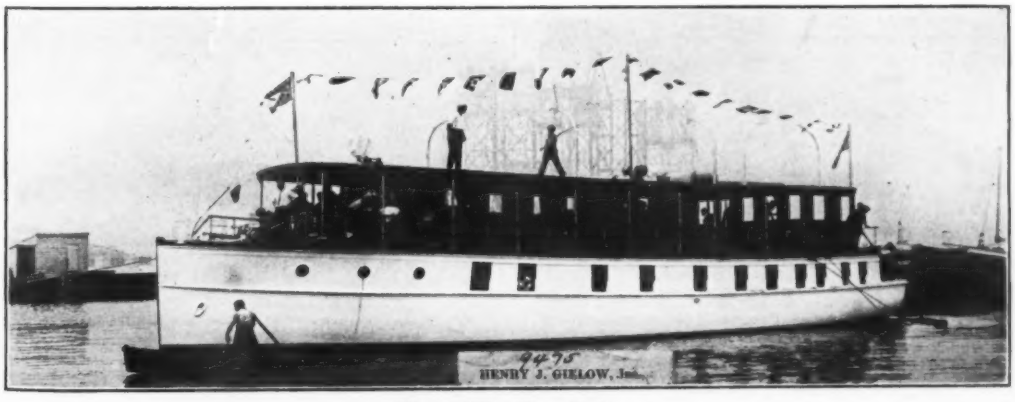
Built in 1918 of the best materials. Oak frames, mahogany planking finished bright, copper fastened.

Powered with Wisconsin Motor installed new 1923, which gives craft speed 12 miles per hour.

Has large main cabin, sleeping four persons, galley and toilet room, also large cockpit.

Entire hull engine and equipment in first class shape.

BARGAIN THE FINEST HOUSEBOAT AFLOAT



No. 9475—For Sale

Due to change in owners plans, this handsome 88-ft. houseboat, completed Fall 1925, is offered at considerably less than original cost.

The accommodations provide two double and two single staterooms, with three modern bathrooms for owner and guests; large deck house, containing dining saloon and lounge, with open fireplace. Exceptional deck space aft, which can be entirely enclosed in stormy weather. Deck house and all deck trim of teak. Two Speedway motors, giving craft speed of 12 to 13 miles per hour. Pressure water system throughout; Brunswick ice plant and many other latest and up-to-date marine appliances which provide the utmost comfort for the owner and his guests.

Now in full commission, awaiting the yachtsman who desires to cruise Florida waters on this palatial houseboat.

QUICK ACTION NECESSARY

Prices and further information from HENRY J. GIELOW, Inc., 25 West 43rd St., New York

Telephone: Murray Hill 9134 Cable Address: Crogie, New York, A. B. C. Code

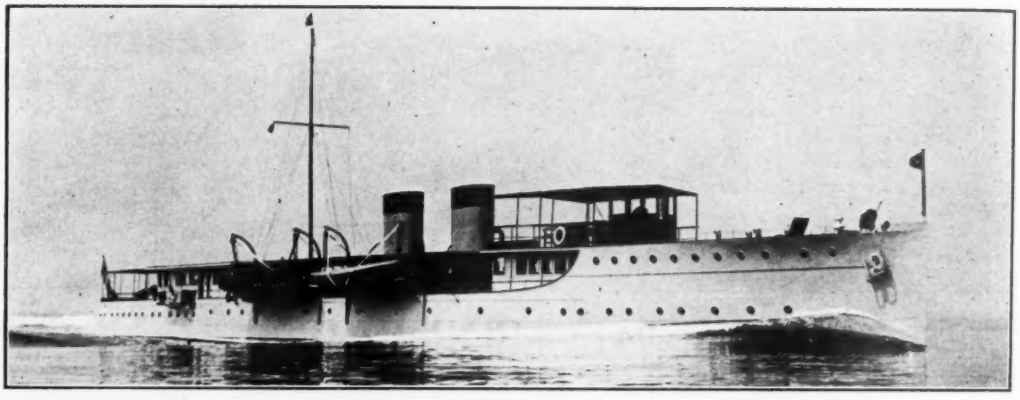
Cable Address: BROKERAGE, NEW YORK

COX & STEVENS

Telephone: WHITEHALL 2700

NAVAL ARCHITECTS—MARINE INSURANCE—YACHT BROKERS
25 BROADWAY, CUNARD BUILDING (Morris Street Entrance), NEW YORK

On this page are shown a few representative yachts selected from our large lists. Should none appeal kindly acquaint us with your requirements. Full information regarding costs to build, purchase or charter yachts of all types gladly furnished.



No. 2887—Largest, high-speed Seagoing Yacht in existance. Our design. Embodies speed of destroyer with comfort and beauty of modern yacht. Speed up to 32 knots. Oil-fired; turbine driven. No vibration. At ordinary speed is economical as ordinary cruising yacht. Ample accommodation. Available at less than one-fourth cost of duplication. Cox & Stevens, 25 Broadway, New York, N. Y.

FLORIDA OFFICE
IN
HOTEL McALLISTER, ARCADE, MIAMI, FLORIDA

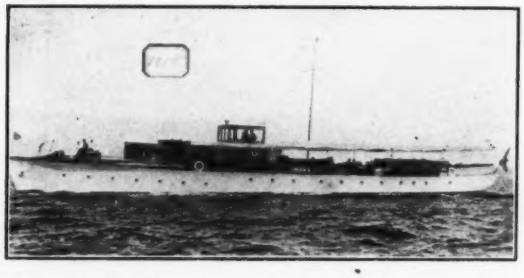
Mr. Thomas C. Landi, head of our Brokerage Department and member of the firm, will be at the above address for the Winter season.

He will have plans, photographs and particulars of all the available yachts for Winter or Summer use. He will also have a full set of booklets of photographs of our latest type Diesel yachts now building and already built. He will also be able to quickly secure good Captains, Engineers and Stewards.

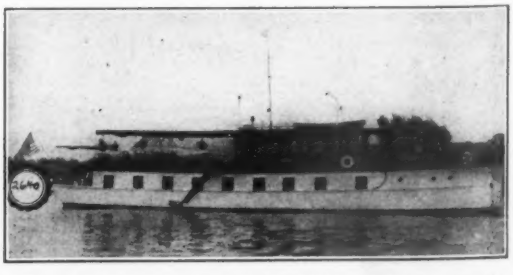
We invite you to take advantage of this service.

COX & STEVENS.

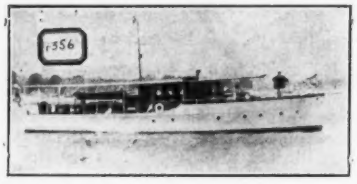
No. 3460—FOR SALE or CHARTER—One of few large motor houseboats available for Florida. Six staterooms, three baths, large deckhouse containing dining and social hall. Winton motors. Hot water heat. Splendid deck space. Prompt action will secure bargain. Cox & Stevens, 25 Broadway, New York City.



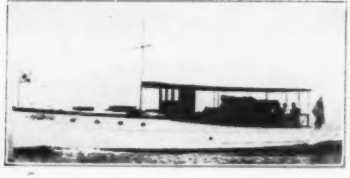
No. 885—For Sale or Charter—Fast, steel, twin-screw, cruising power yacht, approximately 120 ft. in length. Speed up to 16-17 miles; Winton motors. Unusually large accommodation, including deck dining saloon, three staterooms, bath and two toilets. Handsomely finished and furnished. One of the most seaworthy craft of its type. Cox & Stevens, 25 Broadway, New York.



No. 2640—For Sale or Charter—Modern twin-screw 80-ft. Mathis motor houseboat. Speed up to 12 miles; two 6-cylinder Standard motors. Deck dining saloon; below forward two double and two single staterooms, lobby containing transom, two baths and toilet room. Excellent condition. Cox & Stevens, 25 Broadway, New York.



No. 4356—For Sale—Modern 65-ft. Matthews, twin-screw semi-houseboat cruiser. Deckhouse in mahogany. Forward dining saloon, two double staterooms, bathroom and two toilets. All conveniences. Speed, 12 miles; two 60 H.P. Standard engines. Inspectable Great Lakes. Cox & Stevens, 25 Broadway, New York.



No. 4357—For Sale—45-ft. Elco cruiser. One double stateroom and saloon. Sleep six people in separate berths. Standard motor, speed 11 miles. Exceptionally well equipped and in excellent condition. Price attractive. Apply Cox & Stevens, 25 Broadway, New York.

No. 4393—For Sale—High speed, 50-ft., twin-screw cruiser. Speed up to 30 miles; two 6-cyl., 200 H.P. Sterling motors. Hull double planked mahogany. Stateroom, saloon, toilet room, etc. Cox & Stevens, 25 Broadway, New York.

PLANS, PHOTOGRAPHS AND PRICES ON REQUEST

Advertising Index will be found on page 384

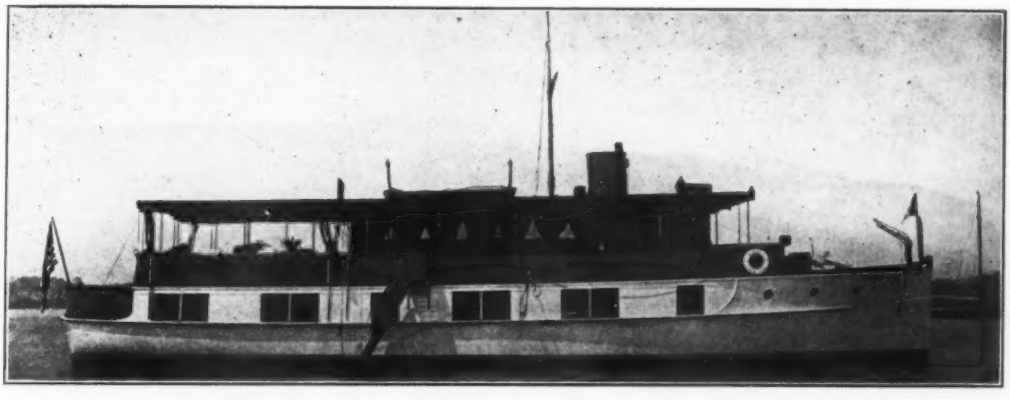
TAMS & KING

NAVAL ARCHITECTS —AND— YACHT BROKERS

Tel, Murray Hill 6656

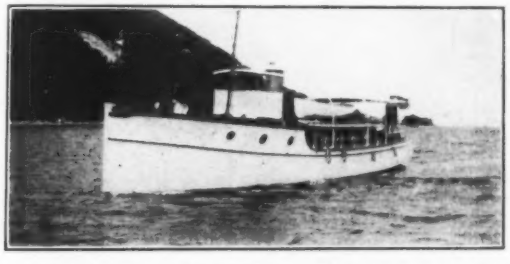
250 Park Ave., New York City

OFFER ALL OF THE DESIRABLE YACHTS AVAILABLE FOR SALE AND CHARTER, SOME OF WHICH ARE ILLUSTRATED BELOW

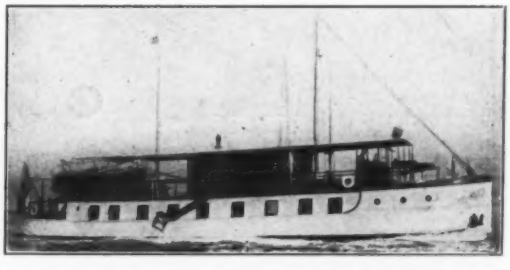


No. 1970—For charter (March 15th to May 1st), this very desirable 75' houseboat—4 staterooms sleeping 6 people, very large deck saloon, 2 bathrooms, etc.

No. 4078—For sale. Price attractive; 52'9" x 34' 10" x 12' 5" x 7'8" draft. Built 1899. Has 1922 Frisbie motor. Good owner's accommodations; excellent condition throughout.



No. 8205—For sale. This attractive 50' raised deck cruiser with twin-screw motors of 50 H. P. each. Cabin with 4 berths, toilet, galley and crew's quarters for 2. Has separate lighting plant and over 6 feet headroom throughout.



No. 1912. For charter. This commodious 77' houseboat; speed 10 miles. Has 4 staterooms, 2 baths, dining saloon and deck sitting room.

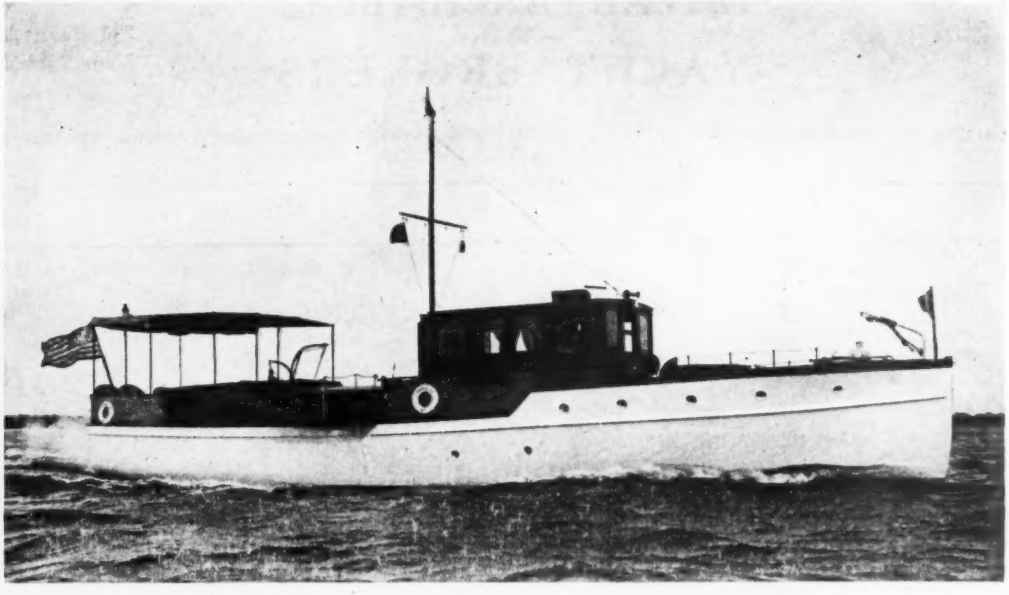
"Visit our booth at the Motor Boat Show"

Telephones Vanderbilt { 0596 / 8415

RIGG'S YACHT AGENCY

350 Madison Ave. (at 45th St.), NEW YORK

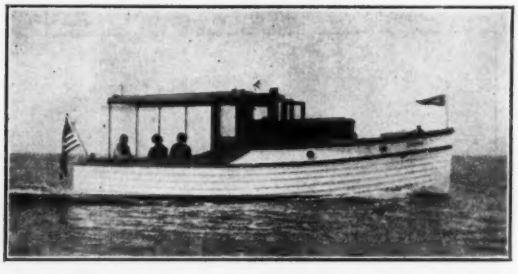
Cable Address "Rigging"



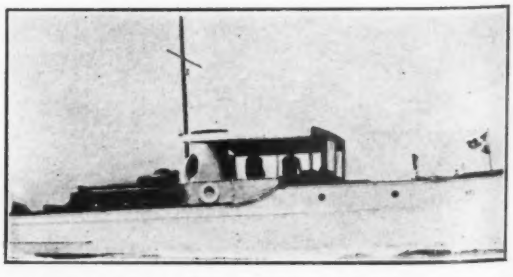
FOR SALE in Florida—No. 3073—Finest bridge-deck power cruiser turned out in recent years. As good as a new boat, having been delivered last summer, and has been kept in wonderful shape. Excellent cabin layout giving two separate double staterooms each with connection to bathroom. Large cabin house with Pullman extension berth. Crew's quarters and galley forward. Dimensions of boat 50' x 13' x 3'6". Engine a 6-cylinder 70-90 h.p. Sterling. Cruising speed 12 miles per hour. A most unusual offering and will be sold quickly so do not hesitate. Wire or write to RIGG'S YACHT AGENCY, 350 Madison Avenue, New York City.

FOR SALE NO. 3196—Comfortable cruiser with three staterooms. Dimensions 70' x 69'6" x 14' x 4'6". Built 1917 by the New York Yacht Launch & Engine Co. Has 150 h.p. Twentieth Century motor. Speed 12 miles. Exquisitely furnished and fitted with all modern conveniences. Location New York. Price and particulars from RIGG'S YACHT AGENCY, 350 Madison Avenue, New York City.

FOR SALE NO. 2029—Express cruiser. 42' x 41' 6" x 10' x 3'. Designed by Wm. H. Hand. Accommodations for four. Complete equipment. Excellent condition. Price very reasonable. For further particulars apply to RIGG'S YACHT AGENCY, 35 0Madison Avenue, New York City.



FOR SALE NO. 626—Most complete small cruiser of sea skiff type. Dimensions 26' x 6'6" x 2'6". Built last summer. Has 100 H.P. Scripps motor which gives speed of 18 miles per hour. Good sea boat and almost ideal for two or three. Very low price for quick sale. Apply RIGG'S YACHT AGENCY, 350 Madison Avenue, New York City.



FOR SALE NO. 3113—One of the finest boats of her type available. Dimensions, 40' x 39'9" x 4'2" x 3'. New Standard motor installed 1922. Can easily be run by one man. For further information apply to RIGG'S YACHT AGENCY, 350 Madison Avenue, New York City.

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"Visit our booth at the Motor Boat Show"

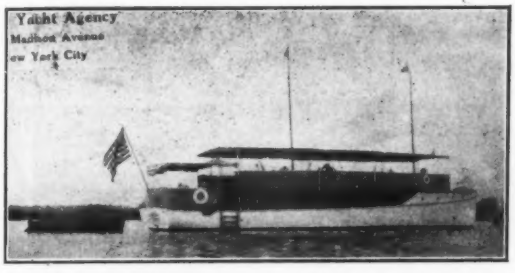
Telephones Vanderbilt { 0596 / 8415

RIGG'S YACHT AGENCY

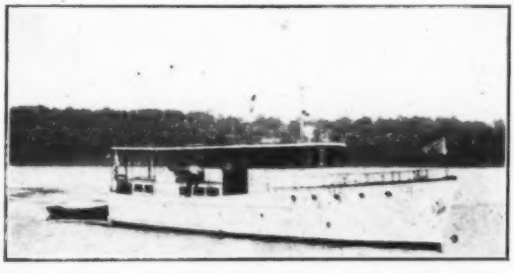
350 MADISON AVE. (AT 45th ST.), NEW YORK

Cable Address "Rigging"

FOR SALE NO. 3034—60' bridge deck cruiser. Practically new, having been delivered last summer. Has two fine double staterooms, bathroom and roomy saloon. Dining saloon in forward deck house. Large two model M Speedway motors. Further particulars from RIGG'S YACHT AGENCY, 350 Madison Avenue, New York City.

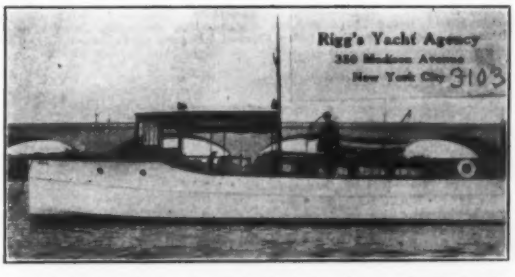


FOR SALE NO. 3035—Power cruiser suitable for either Northern or Southern cruising. Dimensions 65' x 5" x 62' x 14'11" x 4'6". Palmer engine new last year. Splendid roomy and well ventilated owner's quarters. Large upper deck. For further information apply to RIGG'S YACHT AGENCY, 350 Madison Avenue, New York City.

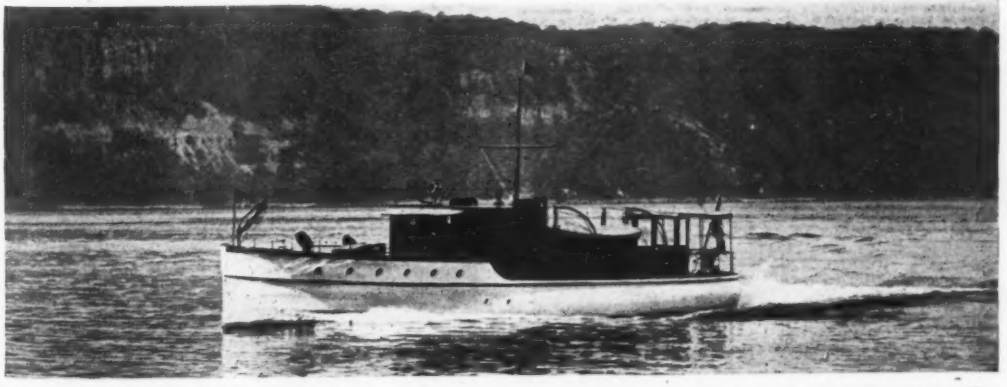


FOR SALE NO. 3074—Modern bridge deck type cruiser with two double staterooms. Four berths in main cabin. Two toilet rooms. Dimensions 50' x 48' x 11' x 3'6". Fully found. Easily handled by one man. Further particulars from RIGG'S YACHT AGENCY, 350 Madison Avenue, New York City.

FOR SALE NO. 3036—Bridge deck cruiser. 62' x 55' x 12'8" x 3'9". Accommodations for four. Excellent condition. Price very reasonable. New 80 H. P. Van Blerck engine 1924. For further particulars apply to RIGG'S YACHT AGENCY, 350 Madison Avenue, New York City.



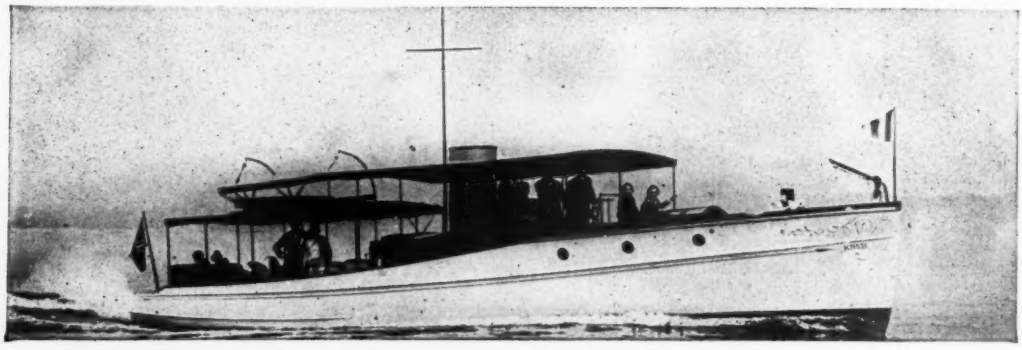
FOR SALE NO. 3103—V-bottom bridge deck cruiser. 42' x 10' x 3'6". Built 1919. Cruising accommodations for six. Very good condition. Bargain price. Further information from RIGG'S YACHT AGENCY, 350 Madison Avenue, New York City.



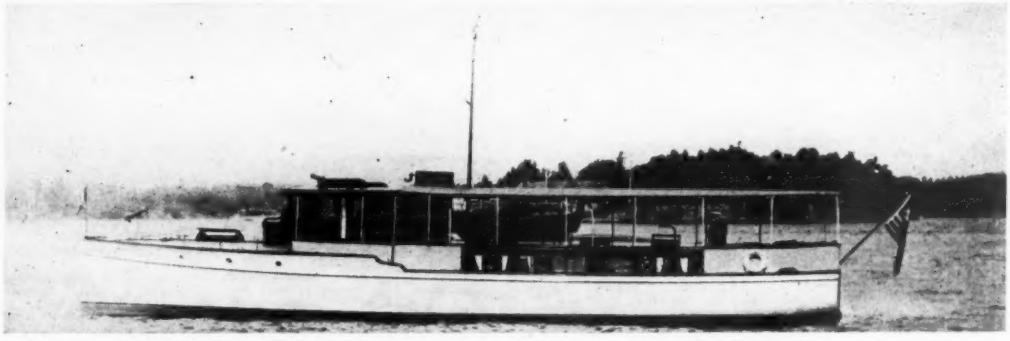
FOR SALE NO. 3052—Twin screw bridge deck cruiser of most modern design. Dimensions 65' x 63' x 14' x 4'. Built last winter by New York Yacht Launch & Engine Co. Beautifully constructed and in wonderful shape. Will stand most critical inspection. Complete equipment. For details apply to RIGG'S YACHT AGENCY, 350 Madison Avenue, New York City.

Naval Architects **JOHN H. WELLS, INC.** Yacht Brokers

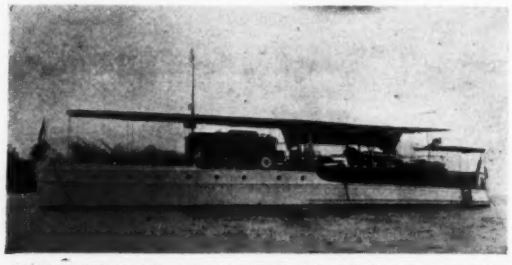
347 Madison Avenue, New York City. Telephone: Murray Hill 3126.



No. 463—FOR SALE—The best conditioned semi-day cruiser available. 55 ft. overall, 10 ft. beam, 3 ft. 6 in. draft. Staunchly constructed and in perfect condition. New 150 H.P. Sterling Dolphin. Installed 1925. Speed 18 M.P.H. Comfortable sleeping accommodations for three people. Toilet room and galley equipment. An ideal cruiser for North or South. For further information and location apply John H. Wells, Inc., 347 Madison Avenue, N. Y. C.

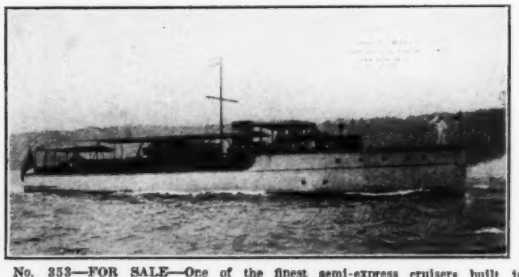


No. 298—FOR SALE—NOW IN FLORIDA. Twin screw bridge deck cruiser. Built 1921. Powered with two 4-cylinder Sterlings. Completely overhauled 1925. Speed 12-14 M.P.H. Controls from deckhouse. One double stateroom, main saloon and galley, bath and toilet. Everything in perfect condition. Available after Feb. 15 in Florida. Further particulars—John H. Wells, Inc., 347 Madison Avenue, N. Y. C.

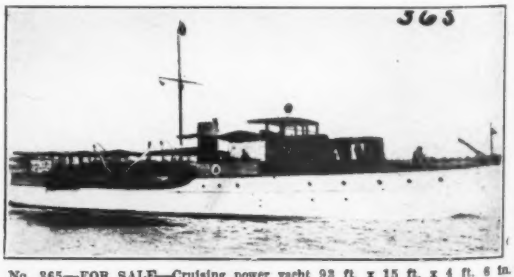


No. 333—FOR SALE—A 75 ft. x 12 ft. 6 in. x 3 ft. 6 in. Powered with two six-cylinder Sterling engines. Speed 13-15 M.P.H. Two double staterooms. Deckhouse containing dining saloon. In good condition. In southern waters. Can be had at a low price. Further particulars—John H. Wells, Inc., 347 Madison Avenue, N. Y. C.

No. 2125—FOR SALE—A 170 ft. Auxiliary Schooner in perfectly wonderful condition. Can be put in commission for a long cruise within a week's time. One double and three single staterooms, 3 baths and 3 toilets. Lounging room in deckhouse. All furnishings and equipment in perfect condition. Can be inspected in N. Y. Further particulars—John H. Wells, Inc., 347 Madison Avenue, N. Y.



No. 353—FOR SALE—One of the finest semi-express cruisers built in recent years. 84 ft. overall. 15 ft. 6 in. beam, 3 ft. draft. Powered with two six-cylinder 6¾x8½ Speedways. Speed 13-14 M.P.H. Built in 1920. In excellent condition. Three double staterooms—one bath and two toilets. Dining saloon and galley below deck. Lounging room in deckhouse. Furnishings and equipment of the finest. Further particulars—John H. Wells, Inc., 347 Madison Avenue, N. Y.



No. 365—FOR SALE—Cruising power yacht 92 ft. x 15 ft. x 4 ft. 6 in. Powered with two 6-cylinder Wintons, 80 H.P. each. Installed 1921. In perfect condition. Speed 12-14 miles per hour. Owner's accommodations two double and one single staterooms, 1 bath, 2 toilets. Lounging room below deck, dining saloon and galley in deckhouse. Everything about boat in perfect condition. Further particulars—John H. Wells, Inc., 347 Madison Avenue, N. Y. C.

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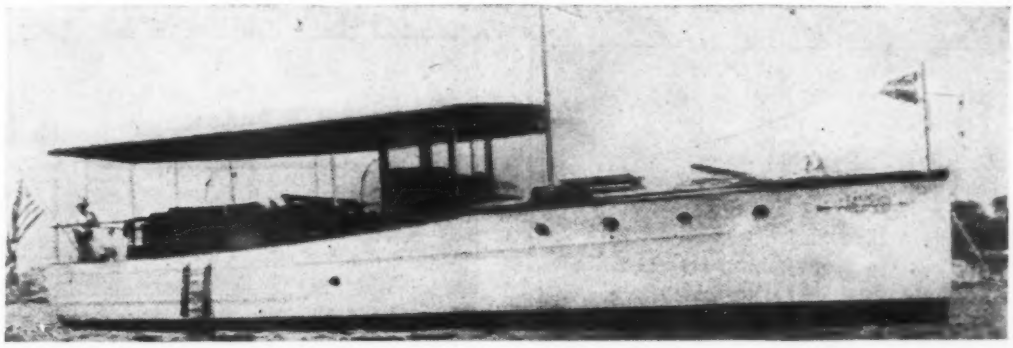
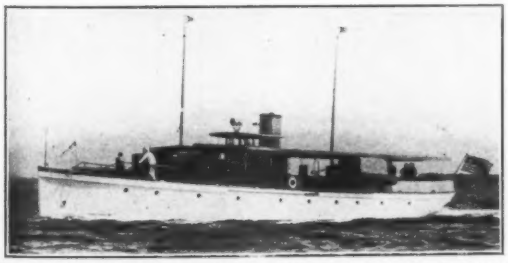
Naval Architects **JOHN H. WELLS, INC.** Yacht Brokers

347 Madison Avenue, New York City. Telephone Murray Hill 3126.

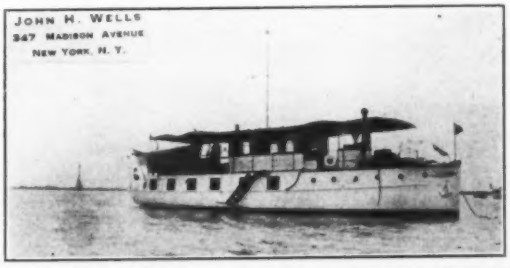


FOR SALE—No. 516—45 ft. Elco Cruiser in perfect condition, available at a very reasonable figure. One double stateroom, one toilet, four extra berths in cabin. Galley and complete equipment. Without a doubt one of the finest conditioned cruisers afloat. Further particulars John H. Wells, Inc., 347 Madison Avenue, New York City.

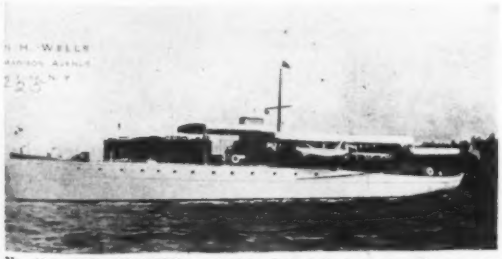
No. 504—FOR SALE—The finest bridge deck cruiser in the fleet. 46 ft. over all—11 ft. 6 in. beam—3 ft. 6 in draft. Extra heavy construction. Oak frames white cedar planking. Powered with one six-cylinder Scripps. Speed 11 M. P. H. One double stateroom, galley, dining saloon, two toilets for the owner, Capt's. room. Completely equipped with electric lights, bilge pump and starter. Plumbing yacht quality throughout. Available for inspection now. Further particulars John H. Wells, Inc., 347 Madison Ave., N. Y.



No. 511—FOR SALE—Flush deck sea-going Motor Yacht 90 Ft. over all, 16 Ft. beam, 6 Ft. draft. Powered with two 6-cylinder Winton Gas Engines. All Winton equipment. One of the finest and smoothest running yachts available. Owner's quarters consist of two double and two single staterooms and one bathroom and two toilets. Wash basins in staterooms. Large dining saloon and galley. Enclosed bridge. Inspection in Florida. Further particulars—John H. Wells, Inc., 347 Madison Avenue, N. Y. City.



No. 1005—FOR CHARTER—The only medium size houseboat available. 61 Ft. overall, 16 Ft. beam, 3 Ft. 8 In. draft. Powered with a six-cylinder 6½x 8" Standard with deck control. Speed 8 knots. Owner's quarters. 3 double staterooms, one bathroom, two toilets, dining saloon below decks, lounging room in deckhouse. Everything in wonderful condition. Inspection Florida. Further particulars—John H. Wells, Inc., 347 Madison Avenue, N. Y. City.



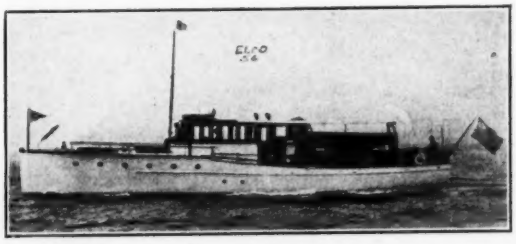
No. 425—FOR CHARTER—A 110-ft. Diesel Cruiser, the only one now available in southern waters. Three large double staterooms and one single stateroom—three baths and three toilets. Dining saloon in forward deckhouse. Comfortable and cozy living room below deck. Excellent deck room. Completely furnished and equipped. The perfect yacht for a winter's cruise in tropical waters. Further particulars John H. Wells, Inc., 347 Madison Avenue, N. Y. C.

No. 368—FOR SALE—A 95 ft. Diesel Yacht—15 ft. beam—5 ft. 6 in. draft powered with a six-cylinder 125 H. P. Winton Diesel. Speed 10 knots. Steel construction. Mechanical equipment in perfect condition. Two large double staterooms, one bath and two toilets. Furnished and equipped in a first-class manner. Now in commission. Further particulars John H. Wells, Inc., 347 Madison Avenue, N. Y. C.

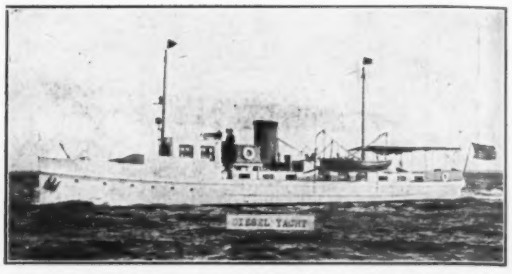
R. M. HADDOCK

NAVAL ARCHITECT **MARINE INSURANCE** **YACHT BROKER**

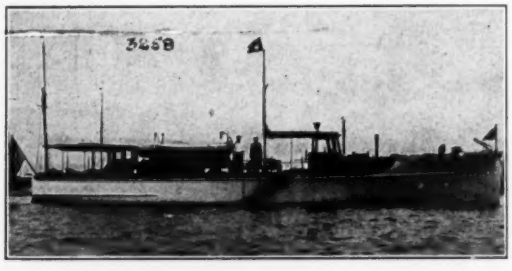
50 EAST 42nd STREET, NEW YORK CITY TELEPHONE, VANDERBILT 1400



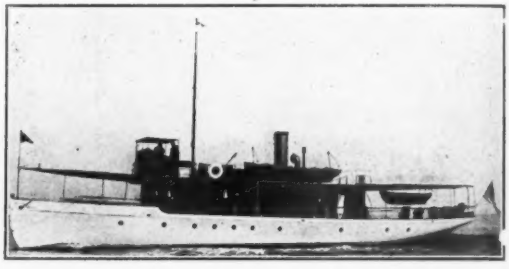
No. 3287—For Sale—Elco 56-foot twin-screw motor yacht, built 1925. One double and two single staterooms. Large deck house; all motor controls brought to steering wheel. Two 50 H.P. Elco motors. For further particulars, consult R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



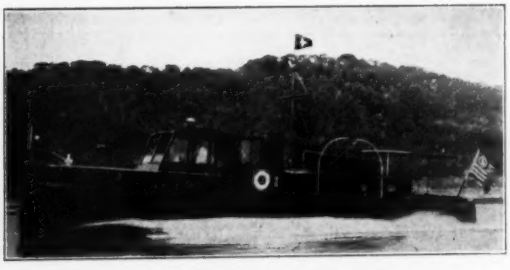
No. 3017—For Sale—Diesel Motor Yacht, 77'x14'x6' draft—cruising radius 1600 miles at 10 knots. Two double staterooms and saloon. Deckhouse. Can be operated at one-half the cost of gas driven vessel same size. All motor controls on the bridge. For further particulars apply to R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



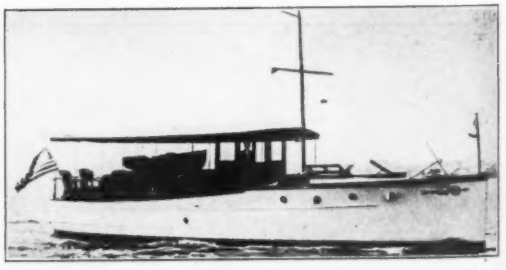
No. 3258—For Sale—Twin-screw motor yacht, 70'x14'x3'6" draft. New 1924. Two Speedway motors, speed up to 18 M.P.H. Accommodations consist of two double staterooms, bath room, large dining saloon forward; one of the finest yachts of her type available. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



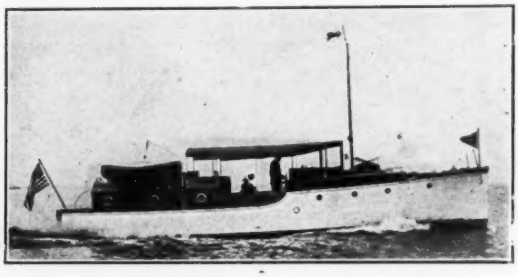
No. 2013—For Sale or Charter—Herreshoff steam houseboat, 90'x16'x6' draft. Three double and one single staterooms, one bath, two toilets. Triple expansion engine, new October, 1924. Very economical yacht to operate. A good sea boat. Inspection invited. For further particulars, etc., apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



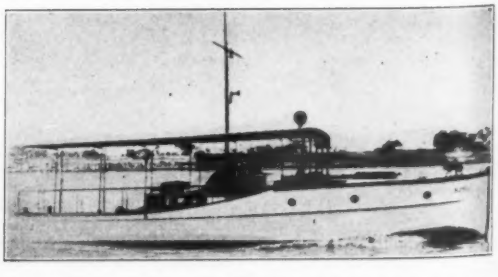
No. 4279—For Sale—Bridge deck motor yacht, new August, 1925. 50'x11'x3'6" draft. 8-cylinder, Model MR, Speedway motor. Speed up to 22 M.P.H. Plan published on page 59, October MoToR BoatinG. Sleeping accommodations for four to six. For further particulars, etc., apply R. M. HADDOCK, 50 East 42nd Street, New York City.



No. 4236—For Sale—Elco 45' bridge deck cruiser, 1924. First-class condition. One of the few boats of this size and type now available. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



No. 494—For Sale—Bridge deck cruiser, 44'x11'x2'6" draft. Sleeping accommodations for four persons; 4-cylinder, 60-80 H.P. Buffalo motor, speed up to 13 M.P.H. A very desirable boat for Southern waters. For further particulars, etc., apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



No. 4275—For Sale—45' bridge deck cruiser, Sterling motor. Sleeps four persons. Speed up to 15 M.P.H. A good sea boat. Price very reasonable. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.

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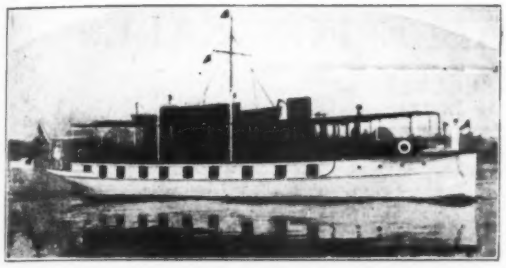
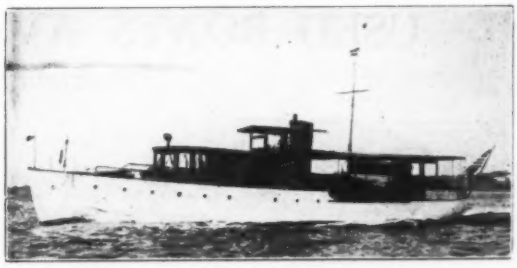
WILLIAM GARDNER & CO.

Naval Architects, Marine Engineers and Yacht Brokers

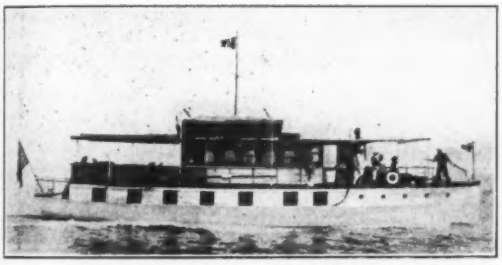
Phone 8638 Bowling Green — No. 1 BROADWAY, NEW YORK — Cable Address: Yachting, N. Y.



No. 202—Latest type houseboat, 85x17.2x3.8, built 1924, two 6 cyl. Speedway motors, speed 12 miles, commodious accommodation.

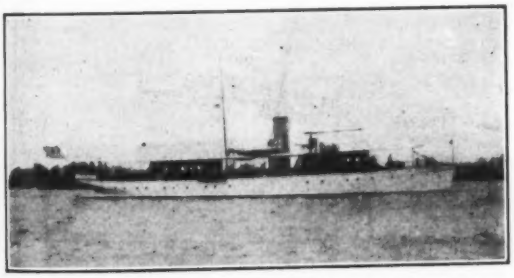


No. 1491—For Sale or Charter—Twin-screw power yacht, 83x14, two 6 cyl. 115 H.P. Speedway motors, speed 14 miles, large deck dining saloon and attractive owner's quarters.

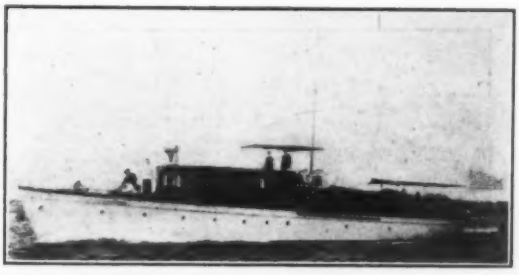


No. 183—For Sale—Attractive 65-ft. Mathis built houseboat; also several other houseboats, 60 to 100 ft., available for purchase and charter. Advise size desired and details will be furnished.

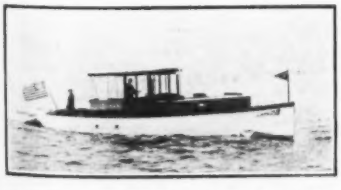
No. 1965—Twin-screw 75-ft. power yacht, Lawley built, two 6-cylinder Speedway motors, speed 16 miles, two owners' cabins and enclosed bridge deck. First-class shape.



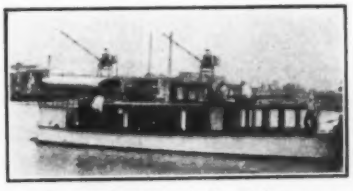
No. 646—Flush deck steel steam yacht, 122 x 17 x 6.6, two large deck houses, 4 double and one single staterooms, 2 baths, 3 toilets. Fully equipped and everything in first class condition. Very reasonable price.



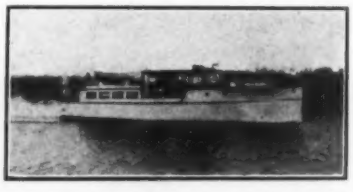
No. 984—Low figure—twin screw power yacht, 90 x 14.9. Standard motors, speed 12 knots, large comfortable deck house, two double and two single staterooms, bathroom, library, etc. Owner now has larger boat.



No. 2897—In Florida waters, Elco cruiser 42' 6", two 4 cylinder motors, speed 16-17, fitted with fish box, chair and bait well. Excellent condition.



No. 2751—Shallow draft, twin screw motor boat, 54.6 x 11.3 x 2.6, two 4 cylinder 40 H.P. motors, new 1920, speed 12-14 miles. Owner has purchased larger boat. Offer solicited.



No. 2908—In Southern waters, twin screw bridge deck cruiser, 40.6 x 8.7 x 2.9, speed 12 miles. Boat well cared for and has had little use.

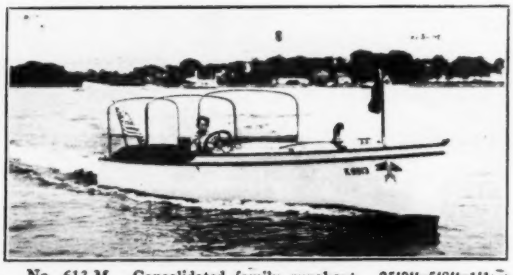
Brokerage Service

CONSOLIDATED SHIPBUILDING CORP.

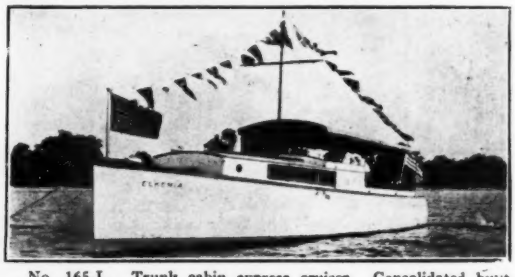
MORRIS HEIGHTS, NEW YORK CITY

USED BOATS AVAILABLE FOR SALE

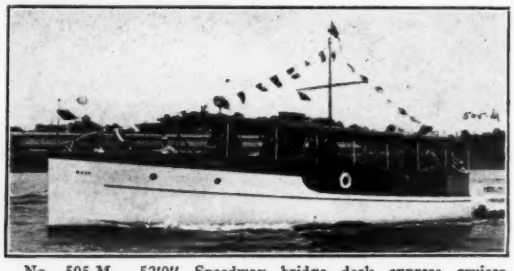
PARTICULARS ON REQUEST



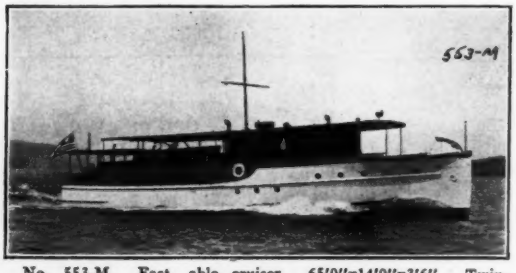
No. 613-M. Consolidated family runabout. 25'0"x5'8"x1'10". 4 cylinder, Model K, 22-28 H.P. Speedway motor. Seats 6 to 8. Speed, 14 to 15 miles per hour. Auto control.



No. 165-L. Trunk cabin express cruiser. Consolidated built. 40'0"x8'9"x2'9". 6 cylinder, Model M Speedway, 150 H.P. Controlled from steersman's bridge. Cabin with transom seats, galley, toilet and wash room, large cockpit. Excellent speed, combined with sea-going qualities.



No. 505-M. 52'0" Speedway bridge deck express cruiser. Beam, 11'5"; draft, 3'0". Motor, 6 cylinder, Model M, Speedway. Has two large cabins. Two washrooms. Sleeps 5. Crew's quarters arranged amidship. Smart built cruiser with desirable speed.

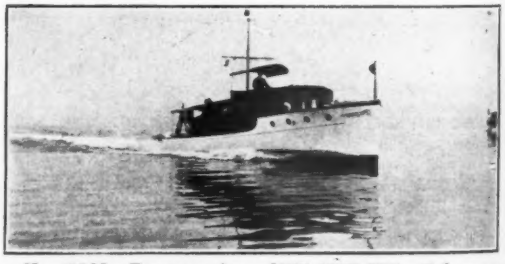


No. 553-M. Fast, able cruiser. 65'0"x14'0"x3'6". Twin-screw. Two 6 cylinder, Model MR, Speedways. Deck control. Large deckhouse. Saloon full width. Double stateroom. Bath connecting saloon and stateroom. Modern cruiser.

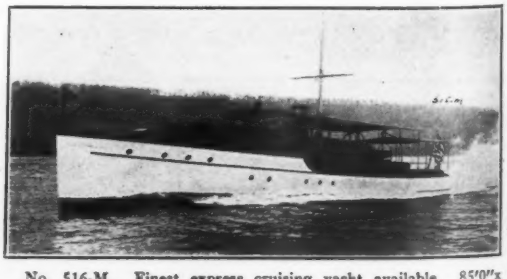
Other desirable used crafts to offer.

No. 590-L. Raised deck runabout. Consolidated built. 32'0"x 6'0"x2'4". 4 cylinder, Model Z, 35-44 H.P. Speedway motor. Auto control. Seats 8 to 10 persons. Speed, 16 to 17 miles.

No. 597-L. Bridge deck express cruiser. Consolidated construction. 47'0"x10'6"x3'0". 6 cylinder, Model MR, Speedway. 180 H.P. motor. Controls from bridge. Forward and after cabin. Sleeps 8 comfortably.



No. 485-M. Express cruiser. 52'0"x11'3"x2'9". Twin-screw. Two 200 H.P. Speedway motors. Speed up to 25 miles. Deckhouse, after cabin, with toilet and wash room connecting, and large cockpit.



No. 516-M. Finest express cruising yacht available. 85'0"x 15'0"x3'9". Twin-screw. Two Model R 300 H.P. Speedway motors. Dining saloon forward. Four staterooms, toilet room and shower. Large bridge and cockpit. Speed of 21 miles per hour.

Brokerage Department. Sedgwick 7800.

Advertising Index will be found on page 384

FRANK BOWNE JONES

YACHT AGENT

Telephone Whitehall 1170

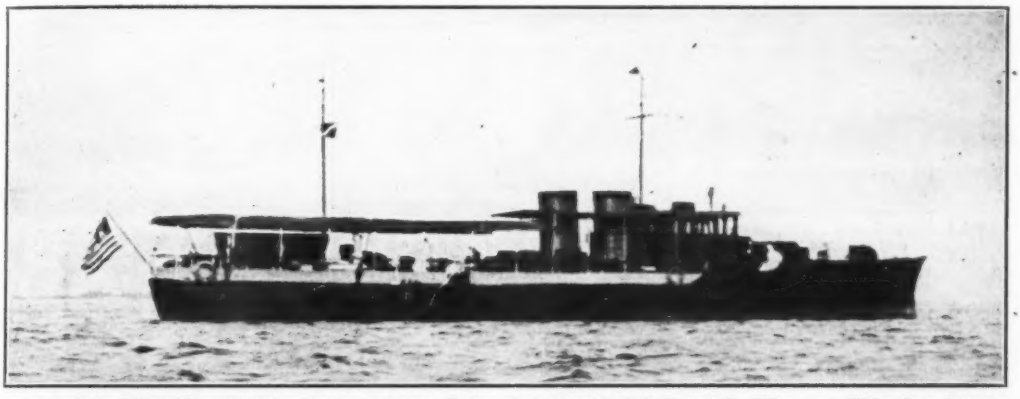
Cunard Building, 25 Broadway, New York

Cable Address "Windward," N. Y.

OFFICE No. 1051

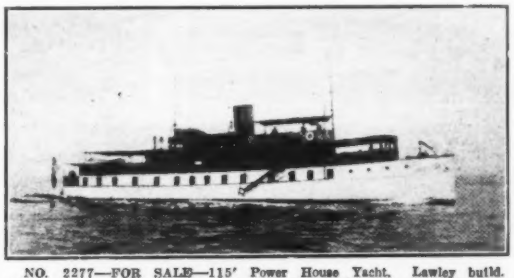
Sales and Charters—Naval Architecture—Marine Insurance—Appraisals

NOTE—"Directly represented in Miami, Florida, during January, February and March."

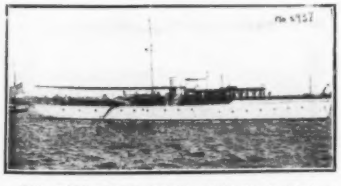


NO. 7560—FOR SALE—115' Modern Express Steel Steam Yacht. Designed and built by Herreshoff. Twin screw. Oil burning. Accommodations include 3 double staterooms, dining saloon and deckhouse forward and saloon with 2 transom berths aft. Entirely refitted and refurnished this year. Condition good as new. Trial speed over 20 knots. Up-to-da te in every detail. Plans and all particulars on file. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.

NO. 7439—FOR SALE—135' Steel ocean-going Diesel Yacht. Splendid vessel of the latest type. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.

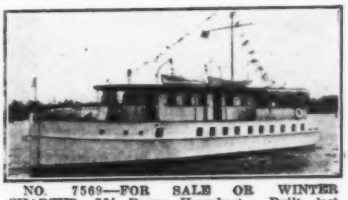


NO. 2277—FOR SALE—115' Power House Yacht. Lawley build. Twin screw. Winton engines. Splendid accommodations. Considered the best yacht of her size and type. Now in Florida waters. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.

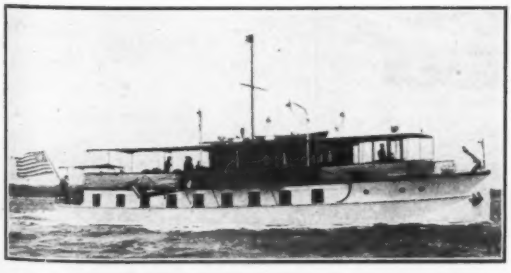


NO. 3937—FOR SALE—120' Steel Cruiser. Best design and build. Twin screw. Speed up to 14 knots. Good accommodations. Attractive price. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.

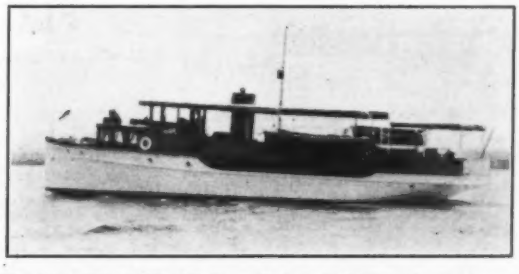
NO. 7942—FOR SALE—62' Express Cruiser. Built 1923. Twin screw. Sterling motors. Speed up to 28 miles. Excellent accommodations. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.



NO. 7569—FOR SALE OR WINTER CHARTER—70' Power Houseboat. Built last year. Condition better than new. Twin screw. Light draft. Reasonable price. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.



NO. 2375—FOR SALE or Charter—80' Mathis Power House Yacht. Twin screw—4 double staterooms—2 baths—deck saloon. Attractive price. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.



NO. 4475—FOR SALE—65' Power Yacht. Condition good as new. 20th Century motor. Installed 1925. Now on way South. Excellent accommodations for yacht of this size. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.

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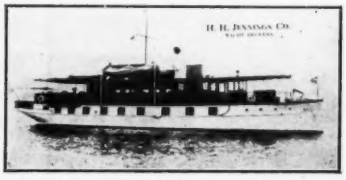
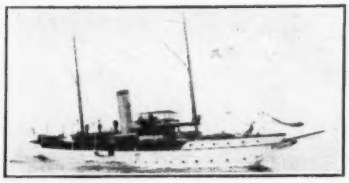
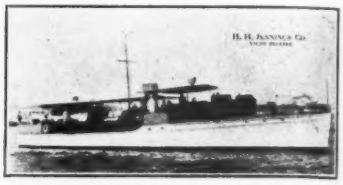
Our 30 Years' Experience and Our Knowledge of the Yachts We Offer, Insure Satisfaction to Clients.



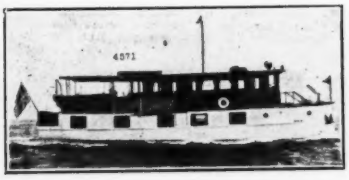
No. 4565—Spring delivery. 85 ft. Mathis Houseboat. Twin screw. Built 1924. Three double and two single staterooms. Large deckhouse containing dining saloon and living room. Pilothouse forward. Three bathrooms. Splendid accommodations for crew. Large galley. Two 100 H.P. Speedway motors. Speed 12-13 miles. Electric plant. Up-to-date with all modern conveniences.



No. 3083—Ocean-going Oil Burning Steam Yacht. Steel construction. 200 ft. long. Splendid accommodation. Eight staterooms, dining saloon, library, social hall, etc. Four baths. Speed 12-15 knots. Cold storage plant. Electric plant, etc. Cruising radius 4,000 miles. Wireless. Submarine signals, etc.

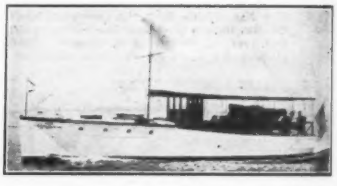


No. 1410—Twin Screw Power Yacht, 85 ft. long. Two staterooms, two berths in main saloon and Pullman berth in deck saloon. Bathroom. Good crew's quarters. Two 65-75 H.P. motors. Speed 14-15 miles. Electric light, hot water heat, etc. Located in Florida waters.

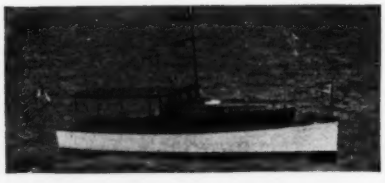


No. 4571—Power Houseboat, 57'x15'9"x 3'6". Built 1925. Two double and one single stateroom. Large deckhouse containing dining saloon, living room and pilothouse. Three toilets and bath. Two berths and toilet for crew. 50-60 H.P. Standard motor. Speed 10-11 miles. Electric plant, etc. Located in Florida.

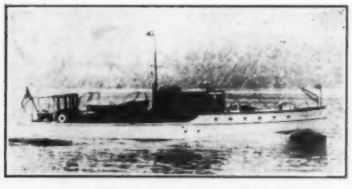
No. 2031—40 ft. V Bottom Cruiser. Double stateroom. Two upper and two lower berths in main cabin aft. Toilet, etc. Plate glass windshield on bridge deck. Deck control. 60-85 H.P. Sterling motor. Speed 14-15 miles. Price very reasonable for quick sale, as owner bought larger boat.



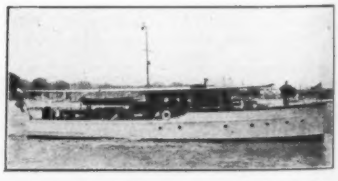
No. 2573—45 ft. Elco Cruiser. New 1924. Double stateroom. Two upper and two lower berths in main cabin. Two toilet rooms. Berth for man. 42 H.P. Elco motor. Speed 11-12 miles. Electric lights, etc. Splendid proposition



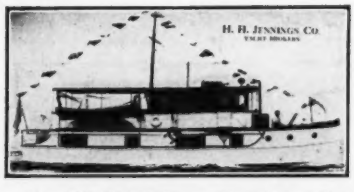
No. 2622.—34-foot Elco Cruisette. Built 1924. Two upper and two lower berths in cabin. Cockpit seats can be used as berths. Toilet; galley. 42 H.P. Elco Motor. Speed 10-12 miles.



No. 2612—Twin Screw 65 foot Power Yacht. Built 1924. Double stateroom. Two berths in main cabin. Two toilets and bath. Deckhouse contains saloon and pilothouse. Large galley and engine room. Two berths and toilet for crew. Two 100 H.P. 20th Century motors. Speed 12-15 miles.



No. 2494—Twin Screw 65 foot Cruiser. Built in 1924. Two double staterooms, berth in dining saloon. Large deckhouse contains saloon with berth and pilothouse. Two toilets and bath. Two 50-60 H.P. motors. Speed 12-13 miles. Good galley and crew's quarters.



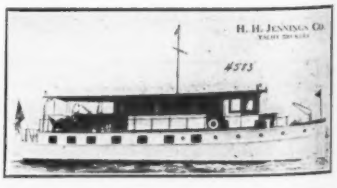
No. 4452—50-foot Power Houseboat. One double and one single stateroom. Two berths in main cabin. Toilet rooms with shower bath. Crew's quarters. 50-60 H.P. Standard Motor. Speed, 11 miles. Delco Plant. Electric Ice Machine, etc. Good proposition.

FLORIDA

If you are contemplating buying or chartering a yacht in Florida, don't delay. We know all the available boats in Florida waters, and will gladly submit offerings, or, if desired, will put you in direct touch with our representative now there.

H. H. JENNINGS COMPANY

154 Nassau Street New York City



No. 4583—60-foot houseboat. Built 1925. Two double staterooms. Two berths in dining saloon. Large deckhouse containing living room. Two toilets. 75-100 H.P. motor. Speed, 10-11 miles. Electric lights. Hot water heat, etc. Splendid proposition.

Our list comprises all the available yachts for sale and charter. The above are a few of our offerings. Send ten cents for our illustrated catalog.

Advertising Index will be found on page 384

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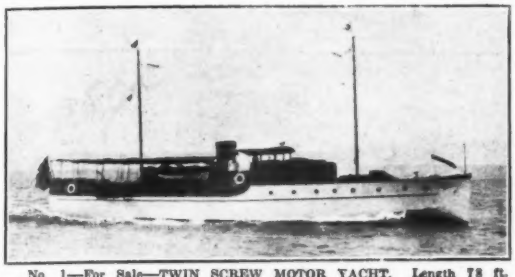
Personal Service
BROKERAGE

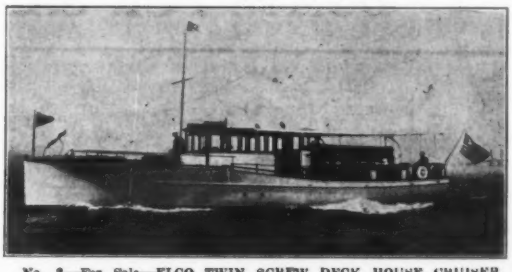
Formerly General Manager of The Elco Works, of Bayonne, N. J.

19 WEST 44th STREET Telephone Murray Hill 8676 NEW YORK CITY

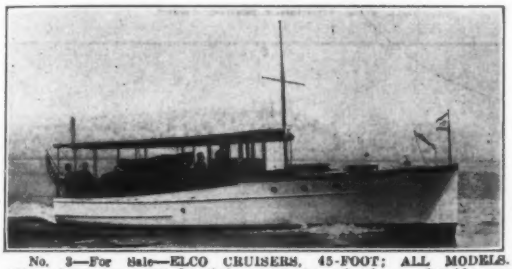
I have a carefully selected list of all sizes and types of Boats and Yachts.



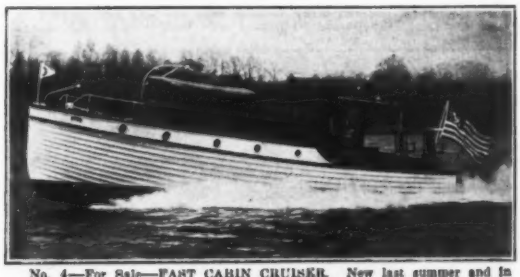
No. 1—For Sale—TWIN SCREW MOTOR YACHT. Length 78 ft. Beam 13 ft. Consolidated construction. Two 6-cylinder Speedway engines. Speed 15 miles. Delightful accommodations. Three large staterooms with bath. Dining-saloon on deck. Crew's quarters forward.



No. 2—For Sale—ELCO TWIN SCREW DECK HOUSE CRUISER. One of these splendid boats of the latest model. Length 56 ft. Has the three staterooms. Description of boat, condition and price, on request.



No. 3—For Sale—ELCO CRUISERS, 45-FOOT; ALL MODELS. These boats are noted for their success in embracing comfortable seaworthiness, with the best cruising arrangements, in a one-man boat. Description of the boats available, their condition and prices, on request.



No. 4—For Sale—FAST CABIN CRUISER. New last summer and in perfect condition. Length 40 ft. Beam 10 ft. Draft 3 ft. Sterling-Dolphin 6-cylinder engine. This boat is unusually well equipped.

YACHT BROKERS
NAVAL ARCHITECTS

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MARINE INSURANCE
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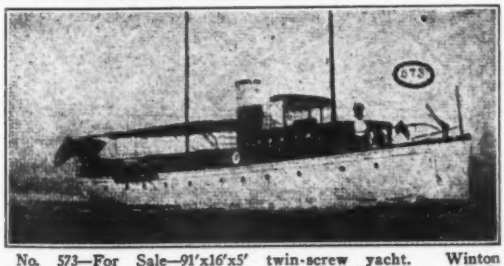
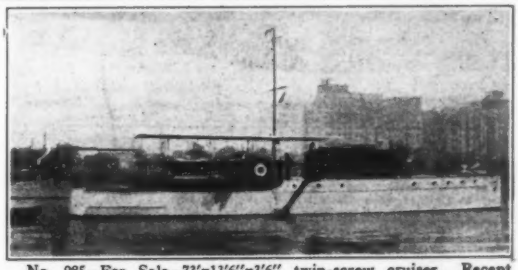
TELEPHONE CENTRAL 1281

WE HAVE A COMPLETE LIST OF ALL STEAM AND POWER YACHTS, AUXILIARIES, AND HOUSEBOATS, WHICH ARE FOR SALE AND CHARTER. Plans, photographs and full particulars furnished on request.



No. 573—For Sale—91'x16'x5' twin-screw yacht. Winton motors. Speed up to 15 miles. Two double and one single stateroom, pullman berth in lobby, bathroom and two toilets in owner's quarters. Beautiful deck dining saloon forward. Yacht in excellent condition throughout. Owner building larger yacht. Price very attractive. Henry C. Grebe & Co., Inc., 6 No. Michigan Avenue, Chicago, Illinois.



No. 985—For Sale—73'x13'6"x3'6" twin-screw cruiser. Recent build. Two single and one double staterooms. Two toilets with showers. Dining saloon and deckhouse. A beautiful boat, mahogany finish throughout and as good as new. Henry C. Grebe & CO., Inc., 6 N. Michigan Ave., Chicago, Ill.

No. 548—For Sale—Attractive bridge deck power cruiser. 65 ft. x 13 ft. x 4 ft., 8 in. draft. Thoroughly modern and splendid seaboat. Bargain for immediate sale. Henry C. Grebe & Co., Inc., 6 North Michigan Ave., Chicago, Ill.

No. 1018—For Sale—54 ft. Great Lakes express cruiser. New 1922. Speed 20-25 miles per hour. Double stateroom and large main saloon. Two toilets and shower bath. Well equipped and in excellent condition. Henry C. Grebe & Co., Inc., 6 North Michigan Avenue, Chicago, Ill.

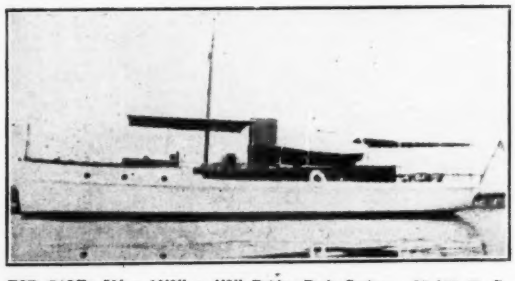
No. 1124—For Sale—42'x10'x3'. Great Lakes Day Cruiser. Used very little. Best condition. 6 cylinder Sterling engine. Speed up to 23 miles. Sleeps four. Large cockpit. Engine room separated from rest of boat. Price very low. Henry C. Grebe & Co., Inc., 6 North Michigan Avenue, Chicago, Ill.

YACHTMEN'S SERVICE AGENCY

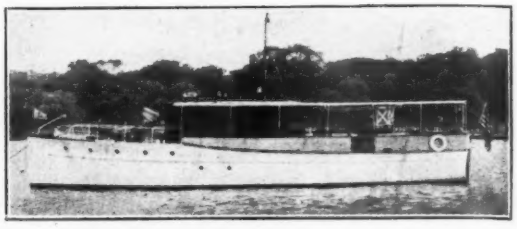
1233 Real Estate Trust Building, Philadelphia, Pa.

PHONE: PENNYPACKER 4830

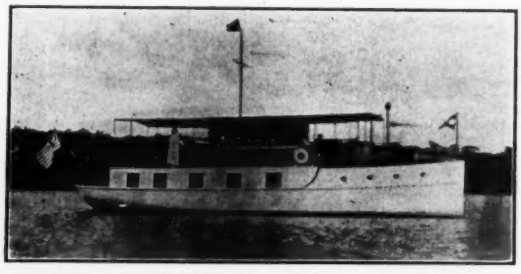
BOATS FOR SALE AND CHARTER



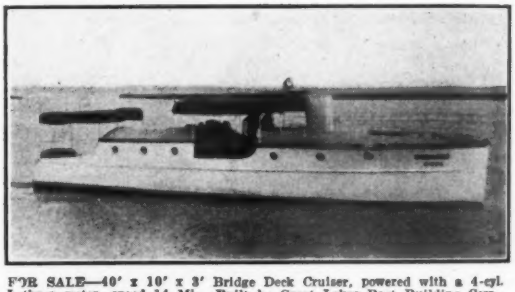
FOR SALE—51' x 10'3" x 4'3" Bridge Deck Cruiser. 75-150 H. P. Speedway, 1919. A very handsome and fully equipped yacht. In first-class condition. For further particulars write Yachtmen's Service Agency.



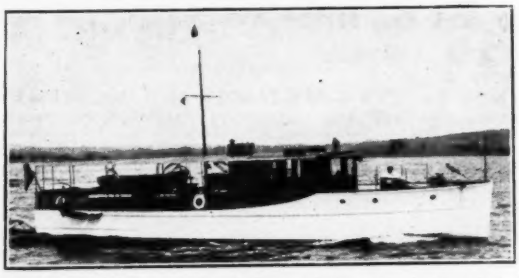
FOR SALE—55' x 13'6" x 3'10" Bridge Deck Cruiser. Two 45 H. P. W. S. M. motors. Exceptionally fine accommodations. Large deck house, double stateroom, galley, toilet and bath, engine room and crew's quarters. Has Delco water and lighting system. Boat in first-class condition. For further particulars write Yachtmen's Service Agency.



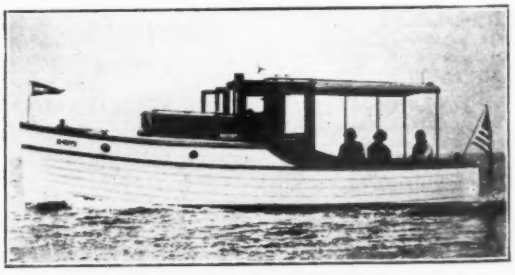
FOR SALE—52' x 14' x 3' Mathis standard House Boat Cruiser. 37 H. P. Standard engine. Accommodations: Two double and one single stateroom, large deck saloon. Boat now being recommissioned, including upholstering, painting and rebuilding of motor. Can be delivered in Florida. For further particulars write Yachtmen's Service Agency.



FOR SALE—40' x 10' x 3' Bridge Deck Cruiser, powered with a 4-cyl. Lathrop motor, speed 14 Mi. Built by Great Lakes Boat Building Corp., 1917. Completely equipped and in first class condition. For further particulars write Yachtmen's Service Agency.

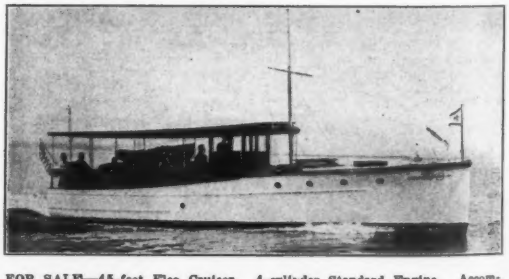


FOR SALE—62'4" x 11'3" x 3' Express Cruiser, built by Herreshoff. Two G. R. Sterling engines, 6 cyl. Boat completely renovated 1924. Everything in first-class condition. Accommodations: Double stateroom, large saloon, galley and crew's quarters, and large deck house. For further particulars write Yachtmen's Service Agency.



FOR SALE—26' x 6'6" x 2' Sea Skiff, Clinker built, 1925. Powered with 100 H. P. Scripps motor, located in cockpit, giving excellent accommodations in cabin. Has galley, ice box, two full length berths, toilet in bow, water and gas tank. Most complete little boat of her size afloat. For further particulars write Yachtmen's Service Agency.

FOR SALE—36'7" x 10' x 3'6" Raised Deck Cruiser. New 40 H. P. Fay and Bowen engine, self-starter and generator. Exceptionally commodious and able boat. Has large cockpit, full headroom in cabin, engine located under cockpit, eliminating odors from cabin. Economical to operate and in first-class condition. For further particulars write Yachtmen's Service Agency.



FOR SALE—45-foot Elco Cruiser. 4-cylinder Standard Engine. Accommodations for six and a crew of two.

ALSO two 40-foot Elco Cruisers. 4-cylinder Elco motors. Boats in excellent condition. Accommodations for six with extra man. For further particulars write Yachtmen's Service Agency.

INFORMATION ON THESE AND OTHER YACHTS AND COMMERCIAL BOATS PROMPTLY FURNISHED

Advertising Index will be found on page 384

LIST YOUR YACHT WITH BECHTEL

We have a constant demand for all types of yachts, both Foreign and Domestic.

For prompt service, inquiries and listings must be complete; time is an important item.

Our organization is prepared to give efficient and expert advice, and backed by years of successful experience and technical knowledge.

If you are expecting to build, send us your requirements, and we will gladly place our services at your disposal.

BRING YOUR YACHTING PROBLEMS TO US

SELL BUY CHARTER

Write for illustrated booklet of designs.

Telephone
Lombard 2072

Naval Architect
and
Marine Engineer

DAVID S. BECHTEL

Associated with

J. Murray Watts

136 South 4th Street,
Philadelphia, Pa.

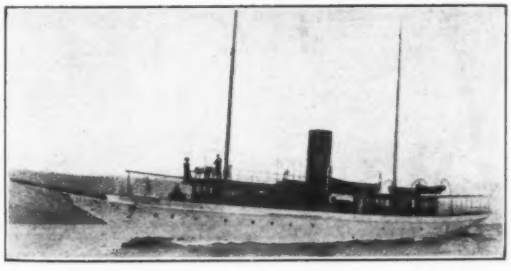
Cable Address
"MURWAT"

Yacht and Vessel
Broker
Insurance Surveyor

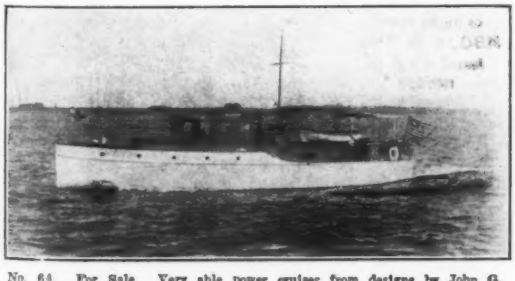
Member of Society of Naval Architects and Marine Engineers

YACHT BROKER **JOHN G. ALDEN** **NAVAL ARCHITECT**

148 STATE STREET **BOSTON, MASS.**



No. 3065. For Sale. 119' O. A. steel steam yacht, 95' W. L. L., 16'6" beam, 7'6" draft. Designed and built by Seabury. In excellent condition throughout; 3 single, 1 double staterooms below; large main saloon in forword deck house; second deck house aft. Crew's quarters, officer's staterooms, galley, mess room, etc., all forward. Although boilers and engine are in good condition, this yacht is suitable for installation of a Diesel motor, which would greatly reduce running expenses. The total cost of converting would be far less than the purchase price of any Diesel yacht. Apply John G. Alden, 148 State St., Boston.



No. 64. For Sale. Very able power cruiser from designs by John G. Alden, built by Nock in 1916. 50'10" x 12' x 3'5". 2 double staterooms with connecting toilets to each; large main cabin and roomy deck house. Accommodations for crew of 3. 40 H. P. Blount & Lovell, 6-cylinder engine. Electric lights, 2 tenders; very complete equipment. A comfortable boat to live on and cruise extensively. In excellent condition. Price reasonable. Apply John G. Alden, 148 State St., Boston.

40 MILE RUNABOUT

No. 3136. For Sale. 26' O. A. x 7'2" beam, designed by Hacker, built by highest grade day labor, of carefully selected and matched mahogany (double planked). 400 H. P. Liberty motor (Capitol conversion); will sustain speed of better than 30 miles with a maximum of 42 miles; motor removed from boat and stored in warm shop each year; starts easily and has never given trouble. Neither motor nor hull have been abused in any way, and have been constantly in charge of an expert. This is not a stock boat. Apply John G. Alden, 148 State St., Boston.

Telephone Vanderbilt 0959
Cable Address Yachtsan, N. Y.

HARRY W. SANFORD

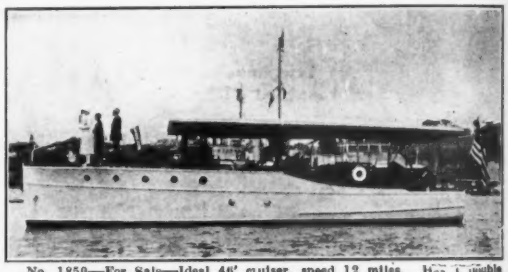
YACHT BROKER
INSURANCE
APPRAISER

501 FIFTH AVENUE (42d ST.), N. Y.

OUR MOTTO: "TO OFFER YACHTS, WHETHER LARGE OR SMALL, WHICH WILL BE A PLEASURE FOR YOU TO OWN AND A RECOMMENDATION FOR US TO SELL; TO RENDER SUCH SERVICE AS TO HAVE YOU FEEL YOU SHOULD LIKE TO DO BUSINESS WITH US AGAIN."

No. 1373—For Sale—High-class twin-screw 66' Express Cruiser, speed 25 miles. Beautiful mahogany hull. Sleeps 7 persons besides the crew. Has tub, toilets, etc. Unusually seaworthy and one of the finest and most attractive yachts available. Offered at a most reasonable price for quick sale.

No. 1982—For Sale—75' power cruiser, speed 12 miles. 4 staterooms, 2 baths, etc. Built in 1925 and high class in every particular.



No. 1850—For Sale—Ideal 46' cruiser, speed 12 miles. Has 1 double stateroom and saloon sleeping 8 persons. Berth for man. Unusually well constructed, most seaworthy and able. Most desirable in every particular.

Chester A. Nedwidek

CHARLES · D · MOWER

E. P. Nevin

· Naval Architect ·

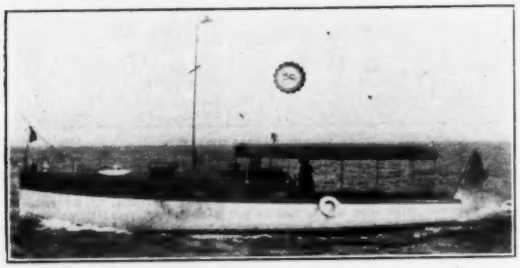
350 MADISON AVENUE
at Forty Fifth Street
· NEW YORK ·

Yacht Brokerage
Marine Insurance

Telephone
Murray Hill 3748

No. 330—For Sale or Charter—Located in Florida waters, 55' house boat. New 1925. Three staterooms, bathroom, large saloon. Ample power, complete equipment.

No. 410—Express cruiser, speed 20 miles. 36'x9'x3'. In perfect condition. Price attractive. Charles D. Mower, 350 Madison Avenue, New York.



No. 36—Very attractive 36-ft. raised-deck cruiser in first-class condition. Completely overhauled last year. Inspection invited. Price very reasonable. Charles D. Mower, 350 Madison Avenue, New York City.

No. 357—FOR SALE—65' twin-screw power cruiser. New 1924. Boat in perfect condition, beautifully furnished. Charles D. Mower, 350 Madison Avenue, New York City.

Advertising Index will be found on page 384

After 12 months
Flexifour is even
more positively
the world's finest
10-15 H.P. Marine
Motor — So, for
1926, Universal
re-Announces
Flexifour, Plus —

Adding 100% Handiness to its Old 100% Sureness

UNIVERSAL has made the messiest chore of motor boating a thing of the past. You won't have to think very hard to know what that is.

Ever change the oil in the crank-case? Like it? You're right!

It takes an hour's session with that messiest chore—down on your tummy with a flat tin tray while *some* of the gooey sump oil spurts into the pan and most of it joins the bilge-water after ruining your trousers and your disposition—it takes that to make one realize just what this little jigger shown on the opposite page means to the motor boat fan! Read what it says over there—it's brief and darned important.

Flexifour, with this new, unique, Hand Sump Pump, with its new 1926 Carburetor (also described opposite), its smart, sparkling new paint "job", its improved magneto coupling, reverse gear and dial-type oil pressure gauge, is going to add new laurels to those it gained in 1925.

For Flexifour's 1925 gain of *twenty-five per cent more power on ten per cent less fuel,* coupled with this new 100 per cent handiness, makes it now, more than ever, the world's best "buy" in small-boat power.

Write for the details—the facts-and-figures. They're absorbing! Mention size and type of craft.

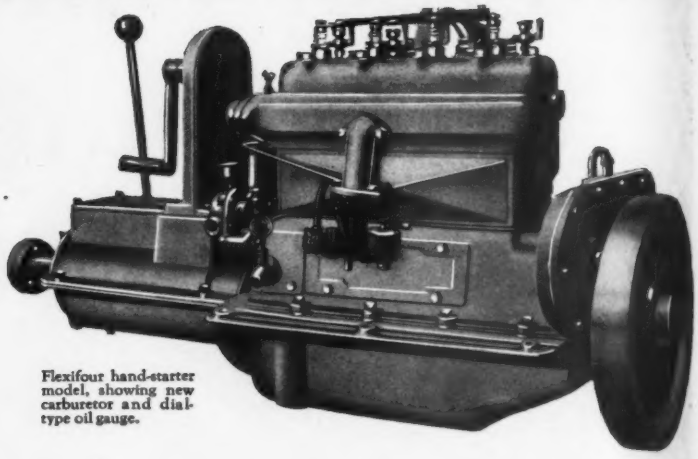
UNIVERSAL MOTOR COMPANY, 40 Ceape Street, OSHKOSH, WISCONSIN

Visit us at the Motor Boat Show January 26th to 30th, Grand Central Palace, New York City

UNIVERSAL

10-15 Horse-Power

Here's Flexifour with the new Bosch automobile-type 6-volt, 2-unit starting and lighting system — supplied now at less cost than previous electrical equipment.



Flexifour hand-starter model, showing new carburetor and dial-type oil gauge.

WORLD'S STANDARD FOR BOATS UNDER 30 FEET

Advertising Index will be found on page 284

Hand Sump Pump

JUST a simple, positive, plunger pump—*always in oil, hence always lubricated and ready to work*—yet never in the way. When it's time to drain the oil from the sump for renewal, merely poke the hose into a bucket or overboard, and pump the crankcase dry with just a few strokes and NO GRIEF! That's all there is to it!

Flexifour Marine Motor

SPECIFICATIONS:

Power—10-15 H. P., maximum at 2000 R. P. M.
Type—Four-cylinder, four-cycle. Cylinders cast en bloc; perfectly honed. Bore 2⅜", stroke 4".
Cylinder Head—Ricardo type. Removable.
Pistons—Light cast iron, heat-treated, machined and ground.
Crank-Shaft—Forged of 40 Carbon Steel; 1½" diameter; balanced; oversize for motor's bore and stroke.
Gears—Accurately cut; camshaft and magneto gears of Condensite-Celeron for quiet, smooth operation.
Lubrication—Combination gravity and splash. Positive plunger type, oil pump easily removable without disturbing other units; sight feed oil pressure gauge. Special separate Hand Sump Pump for draining.
Ignition—Atwater Kent distributor and coil or Bosch Magneto.
Carburetor — Special brass and Monel Metal, compensating jet type, affording perfect power control at all speeds.
Reverse Gear—Universal Planetary type, fully enclosed.
Clutch—Universal Multiple Disc.
Cooling—Bronze, gear-type water circulating pump, driven off the camshaft at half engine speed.
Over-All Dimensions — Height, 19⅝"; length, 43⅜" (including Reverse Gear and coupling flanges); width, 15"; bottom to mounting flanges, 5".

New 1926 Carburetor

Simple low and high speed adjustments make possible top notch performance under all climatic conditions. Easier starting and peppier response to the throttle are gained by a unique spray arrangement at the needle valve, which breaks up and vaporizes the fuel more readily. This unique feature permits good performance on lower grades of gasoline or kerosene. Salt water does not harm it—it's all brass and Monel Metal.

Universal Flexifour MARINE 10/15 MOTOR H.P.

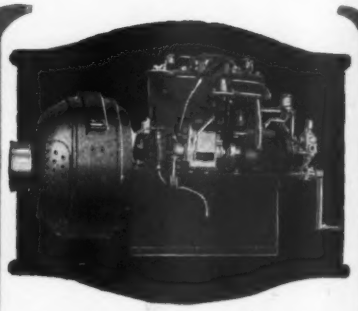
WORLD'S STANDARD FOR BOATS UNDER 30 FEET

Tough, Tidy and Sea-Goin'—*that's why they're Favorites!*

THERE'S not much point in putting up with half-lighting on a sizeable boat, just because the auxiliary generator quits when you shut the main motors down. Think a moment—aren't most of your big parties and jollifications pulled off when you're at anchor? You want light, and lots of it, then! How about engine-room trouble in a rough sea at night—certainly no time to have the lighting equipment shut down too!

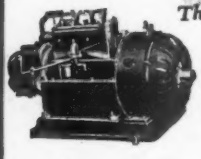
You *need* separate lighting equipment—and for compactness, generous capacity, unequalled lightness, smooth and flickerless current, and a degree of dependability that has become a tradition wherever Marine Electric Plants are used—for all these demands packed into one snappy, peppy, economical bundle, you NEED UNIVERSAL.

Universal Marine-Type Electric Plants are built to fit the job, in five popular sizes: 1½ K. W., 2½ K. W., 4 K. W., 7½ K. W. and 12½ K. W., Any Universal Plants operate equally well either with or without batteries.



The New Universal 4 K. W.

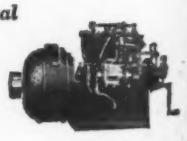
A popular size. Note that the specially wound generator is bolted direct to motor bell-housing, saving greatly in weight and size and assuring permanent shaft alignment. In 32 or 110 volts; with or without batteries. 19¼" wide, 23¼" high, 45¼" long; weight 540 pounds.



The New Universal 1½ K. W.

Can be used with or without batteries; in 32 or 110 volts. 18⅜" wide, 41¼" long, 25½" high; weight 495 pounds.

The New Universal 2½ K. W.



Can be used with or without batteries; in 32 or 110 volts. 18¼" wide, 45¼" long; 23¼" high; weight 510 pounds.

Universal MOTOR CO. *Complete Line* ELECTRIC PLANTS

Only a 4-cylinder motor (type used on all Universal Electric Plants) can give the smoothness of operation and flickerless current, so greatly appreciated by Universal owners.

All Universal Electric Plants are driven by 4-cylinder, 4-cycle motors very similar in design to the world-famous Universal Flexifour Marine Motor. All are water-cooled.

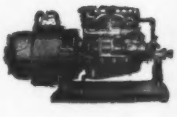
Merely closing a switch starts your Universal Electric Plant. From there on, operation is automatic—a governor automatically maintains constant voltage, thus assuring steady, flickerless, current supply. Pressing a button stops the Universal—the *only* simple, sure and economical way.

All Universal Marine-Type Electric Plants are finished with great care, and such parts as the gear-type water pump, water pipes, pet cocks, controls, etc. are nickel plated. The best of accessories and the finest finish possible makes Universal a marine job of which anyone may be proud.

UNIVERSAL MOTOR CO.
40 CEAPE STREET OSHKOSH, WIS.

The New Universal 7½ K. W.

More weight saved by specially designed rigid base; for use with or without batteries; in 110 or 220 volts. 19" wide, 62" long, 28½" high; weight only 875 pounds.



The New Universal 12½ K. W.

With or without batteries; 110 or 220 volts; 23" wide, 76" long, 35" high; weight 1500 pounds.

Dimensions given above are, in all cases, *over-all*. The base dimensions, as can be readily seen, are much less. Switchboard is supplied in all cases, as standard equipment, to be mounted on wall.

Advertising Index will be found on page 381

A DEPENDABLE SELECTION
OF
REBUILT MARINE ENGINES

Sterling, pair Dolphin 6, 235 h.p. ea., high speed*
Sterling, Dolphin 8, 300 h.p., high speed*
Sterling, Dolphin 6, 110-165 h.p., medium*
Scripps, E 4 cyl., 45-70 h.p., high speed*
Scripps, E 4 cyl., 30-45 h.p., med. duty*
Sterling, D 4 cyl., 25-35 h.p., heavy duty
Sterling, B 4 cyl., 20-35 h.p.
Sterling, E 4 cyl., 17-25 h.p.

*With electric starter equipment.

Buffalo, MY 4 cyl., 25-30 h.p.
Speedway, E 4 cyl., 25 h.p.
Gray, F 4 cyl., 12-15 h.p.
Murray & Tregurtha, pr. 4 cyl., 40-60 h.p. each
Gray, D 2 cyl., 10-12 h.p.
Frisbie, FD 2 cyl., 16-18 h.p.
Regal, Y 1 cyl., 2 h.p., 4 cycle
Lathrop, 16 h.p., 2 cyl., 2 cycle

SPECIAL BARGAINS IN SHOPWORN DISPLAY MOTORS, OTHERWISE BRAND NEW AND NEVER USED

Scripps, D 2 cyl., 10-12 h.p.
Frisbie, FD 2 cyl., 18-20 h.p.
Doman, 2 cyl., 8-10 h.p.
Universal, C-3, 4 cyl., 9-12 h.p.

Used 2KW. 32V. Unimote Marine Gen. Set and Erico Bilge Pump

For full particulars and complete list of rebuilt and used engines write

WALTER H. MORETON CORP.

780 COMMONWEALTH AVENUE

BOSTON—MASS.

GRAY-ALDRICH COMPANY, INC.

REBUILT ENGINE BARGAINS

Engines thoroughly rebuilt and guaranteed at prices below, F. O. B. Boston, ready for prompt delivery.

7 H.P.,	Bridgeport, 1 cyl., 2 cycle, M. & B. spark	$95.00
4 H.P.,	Palmer, 1 cyl., 2 cycle, M. & B. spark	80.00
7 H.P.,	Hartford, 1 cyl., 2 cycle, M. & B. spark	65.00
8 H.P.,	Lathrop, 1 cyl., 2 cycle, M. & B. spark	155.00
24 H.P.,	Lathrop, 2 cyl., 2 cycle, M. & B. spark	375.00
12-14 H.P.,	Loew Victor, 2 cyl., 4 cycle, J spark, with reverse gear	175.00
15 H.P.,	Knox, 2 cyl., 2 cycle, J spark	150.00
15 H.P.,	Knox, 2 cyl., 2 cycle, J spark with reverse gear and propeller	175.00
24 H.P.,	Loew Victor, 4 cyl., 4 cycle, J spark, with reverse gear	300.00
16-18 H.P.,	Standard (New Jersey), 2 cyl., 4 cycle, with reverse gear and propeller	500.00
16 H.P.,	Lathrop, 2 cyl., 2 cycle, M. & B. spark, with propeller	250.00
10 H.P.,	Buffalo, 4 cyl., 4 cycle, with reverse gear	150.00
6-8 H.P.,	Gray, Model U, 2 cyl., 2 cycle, J spark	75.00
10 H.P.,	Lathrop, 2 cyl., 2 cycle, M. & B. spark	165.00
60-70 H.P.,	Two (twin screw pair) Holmes, 6 cyl., 4 cycle, J spark, with magnetos, reverse gears, timers, coils, bilge pumps, and propellers, each	600.00
1½ H.P.,	Fairbanks-Morse, Type Z, stationary, J spark	$42.00
24 H.P.,	Lathrop, 2 cyl., 2 cycle, M. & B. spark, with Paragon reverse gear	445.00
16 H.P.,	Lathrop, 2 cyl., 4 cycle, J spark, with reverse gear and propeller	375.00
	Paragon Reverse gear, special built, high speed, Model B	100.00
	Hyde Propeller, 48 in. x 30 in., pitch 3-bl., R.H. bored	150.00
12 H.P.,	Morton, 4 cyl., 4 cycle, J spark	165.00
42-60 H.P.,	Frisbie, 4 cyl., 4 cycle, with reverse gear, Atwater-Kent ignition and magneto	600.00
14 H.P.,	Fay & Bowen Gobest, 4 cyl., 4 cycle, with magneto and rear hand starter	285.00
5 H.P.,	Fay & Bowen, 1 cyl., 2 cycle, M. & B. spark and reversing propeller, complete	75.00
16 H.P.,	Lathrop, 2 cyl., 4 cycle, J spark, with reverse gear and magneto and propeller	375.00

All of the above engines are fitted with carburetors, lubricators and shaft couplings. Further particulars of any will be gladly furnished on request and entirely without obligation.

ENGINES NOT REBUILT

We also have a few engines that we have not had time to overhaul on account of pressure of other repair work, and they are offered below in "as is" condition, crated, f. o. b. Boston, at extremely low prices. Further particulars on request.

4 H.P.,	Essex, 1 cyl., 2 cycle, M. & B. spark	$40.00
12 H.P.,	Palmer, 2 cyl., 2 cycle, J spark	49.00
12 H.P.,	Jager, 2 cyl., 4 cycle, J spark	30.00
10 H.P.,	Lathrop, 2 cyl., 4 cycle, M. & B. spark	65.00
12 H.P.,	Eagle, 2 cyl., 2 cycle, with reverse gear	$75.00
24 H.P.,	Lathrop, 2 cyl., 2 cycle, M. & B. spark	95.00
4-6 H.P.,	Pierce Budd, 1 cyl., 2 cycle, J spark	40.00
20 H.P.,	Buffalo, 2 cyl., 4 cycle, with reverse gear	225.00

If you do not find in the lists above the size or make that you want, write us and tell us what you are looking for; because we are constantly adding to our stock and just the engine you want may have come in since this list was sent to the publishers.

GRAY-ALDRICH COMPANY, INC.

5 AND 6 COMMERCIAL WHARF, BOSTON, MASS.

FOR SALE — Day Cruiser "Greyhound"

Ideal boat for Florida winter use

Day Cruiser Greyhound. Built by Wood & McClure. Designed by Tams & King. Mahogany hull—natural finish. Trunk cabin with toilet and galley.

Will sleep two comfortably—crew's quarters for three. L. O. A. 58 ft. 6 in. Beam 10 ft. 5 in. Depth 5 ft.
Power—Two 12 Cylinder, 450 H.P. Liberty Motors. Hull and Motors in excellent condition.
Maximum speed 33 M.P.H. Cruising speed 20 M.P.H. Price $35,000 net to owner.
Boat available for inspection at Henry B. Nevin's, Inc., City Island, New York City.

Address inquiries to Edsel Ford, Ford Motor Company, Detroit, Michigan

Advertising Index will be found on page 384

REBUILT ENGINES

Inspect the largest exhibit of new and rebuilt marine engines in the world.
Over 200 engines, 3 to 400 H.P.

BRUNS KIMBALL & CO.
"Originators of the Rebuilt Engine"
50-52-54 WEST 17TH STREET, NEW YORK CITY

Here's a Boat All Ready for Your Southern Vacation

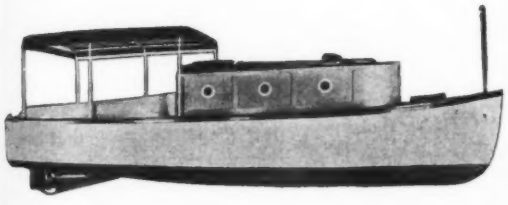
There will be real enjoyment and comfort for you down in Florida's balmy climate and restful atmosphere with a BRAND NEW boat like this. It is all ready to ship down, ready for your arrival.

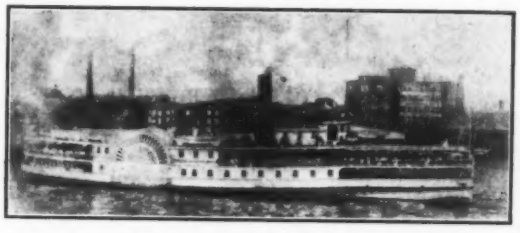
Sea skiff type. Built specially for rough weather. 26 ft. long, 25 inches draft, 7 ft. beam. N.J.M. Model 7-15 H.P. Motor with generator and battery for lights.

Price—$2,650.00 complete F.O.B. Keyport, N. J. Ready for immediate shipment. Escape the uncertainty of accommodations and beat the high living costs by ordering this boat at once.

Write, wire or 'phone for full particulars.

New Jersey Motors, Inc.
Keyport, N. J.





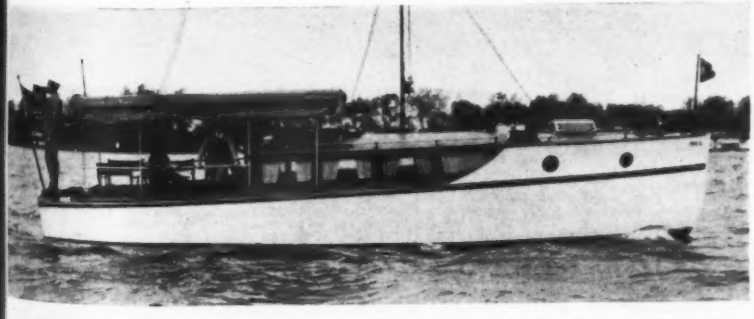
FOR SALE—Will sacrifice for $50,000.00. Steel hull excursion boat in perfect condition, in commission and ready for sea. 215 ft. long; 32 ft. beam; hull 52 ft. extreme beam; 6 ft. draft loaded; oil burning. Will carry 25 to 30 automobiles and 1500 excursionists. Just the boat for Florida trade. Walter Cook Keenan, 602 L. & L. & G. Building, New Orleans, Louisiana.

No. 566—Runabout hull built 1923, used two seasons, in perfect condition and guaranteed by us. Suitable for the installation of any power plant. With Liberty or similar power speed in excess of 40 M.P.H. can be obtained. Mahogany hull finished bright with forward and after cockpits. Price, $1,000.00. No offers. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.

USED ENGINES

Largest Stock in the Country
4 to 400 Horse Power

BELLE ISLE BOAT and ENGINE CO.
9664 East Jefferson Ave. DETROIT, MICH.
393 Seventh Ave., New York, N. Y.



FOR SALE—Used 35-foot raised deck cruiser, sleeps 4, two cabins, toilet and galley. Three years old. Powered with a 6-cylinder Model E Scripps motor, speed 12 miles. Excellent condition. Will sell for $3,000. Can be inspected at Rochester.
ROCHESTER BOAT WORKS, INC., ROCHESTER, N. Y.

FOR SALE—Sterling Engine, Model B-2, 20-35 H.P., 4 cylinder, 4 cycle, 4½" bore, 5½" stroke. This engine used comparatively little and only in fresh water, and is guaranteed in first class condition, thoroughly rebuilt. Equipment consists of Bosch Magneto, built in Sterling Reverse Gear Enclosed. Model L—Schebler Carburetor—Rear Starter, etc. R.P.M., 500 to 1000; weight, about 900 lbs. Suitable to Cruiser 28 to 35 feet. Price $550.00. Can be seen here. NEWTON DONOVAN, 206-16 Palace Boulevard, Bayside, Long Island. Telephone Bayside 1267.

MACHINIST'S OPPORTUNITY — South shore of Long Island, completely equipped machine shop, gas and oil station and agency for a number of motors. All year business of such proportions that owner turns work away. Owing to bad health he must discontinue. Will accept $4,000 cash. V. M. CAROLIN, Sayville, Long Island.

Pair 400 H.P. Murray & Tregurtha high speed, light weight, practically brand new, engine fully equipped, rebuilt, and guaranteed, at fraction of new cost. BRUNS KIMBALL & CO., Inc., 50 west 17th Street, New York City.

THE MOTOR BOATING MARKET PLACE

Opportunities for the Motor Boatman

The rate for "For Sale" and "Want" advertisements is 8 cents per word, minimum $2.00. If an illustration is used, the charge is as follows, which includes the making of the cut:

Cut one inch deep, two inches wide..... $ 9
Cut 1½ inches deep, three inches wide..... $12
Cut 2¼ inches deep, four inches wide..... $20
Cut 2¾ inches deep, six inches wide..... $25

Before you buy or before you sell examine the exceptional buying and selling opportunities under this heading. They comprise the best offers of the month. Please mention MoToR BoatinG.

MoToR BoatinG, 119 West 40th St., New York

Classified advertisements set entirely in small light face type. No extra charge for capitals. Bold face type used at display rate, $12 per inch, single column. New advertisements can be accepted up to twelfth of month for following issues.

PAIR 225 H.P.

STERLING DOLPHINS—6 Cylinder

Operated less than two seasons—very latest equipment—practically brand new.
Rebuilt, guaranteed for year at bargain price—write for details.

BRUNS KIMBALL & CO., 50-52-54 West 17th Street, New York

BOAT BUILDERS, cabinet makers and helpers: An opportunity to obtain employment, locality particularly suitable for comfortable living, with a corporation manufacturing boats. Wages dependent upon ability to produce. The Sea Sled Corporation, West Mystic, Conn.

FOR SALE—One new 65'x16'x7" motorboat. Will install motor and complete to suit. U. J. McCann, Charlevoix, Mich.

18-25 H.P. Sterling, four-cylinder, 4¾ x 5½, model B, ideal for small cruisers, rebuilt, guaranteed for year like new engine, at ridiculous price. BRUNS KIMBALL & CO., Inc., 50 West 17th Street, New York City.

A GENUINE BARGAIN

One pair (right and left) Model N six-cylinder Van Blerck engines, rates 115-156 H.P. each, overhauled, excellent condition, for quick sale at $1500.00 for the pair, or $800.00 each. MARINE EQUIPMENT & SUPPLY CO., 116 Walnut St., Philadelphia, Pa.

FOR SALE—70' Elco motor-yacht. 170 H.P. engine installed 1924. Price very low, must sell at once, need money in business. W. S. Rohn, 68 Kingsbury St., Needham, Mass.

WANTED

Bridge deck cruiser, about 50 or 55 feet in length, must be in perfect condition. Give full particulars. Box 174, care MotoR BoatinG.

150-180 H.P., eight-cylinder Sterling overhead valve model R, light weight, high speed. Cost over $3000.00 new. Bargain. H. E. SCHREINER, 19621 Ninety-first Avenue, Hollis, L. I., N. Y.

100 H.P. Scripps model E-6 late engine, starter, generator, double ignition, built in reverse gear, complete, thoroughly rebuilt, and guaranteed for year, at attractive price. BRUNS KIMBALL & CO., Inc., 50 West 17th Street, New York City.

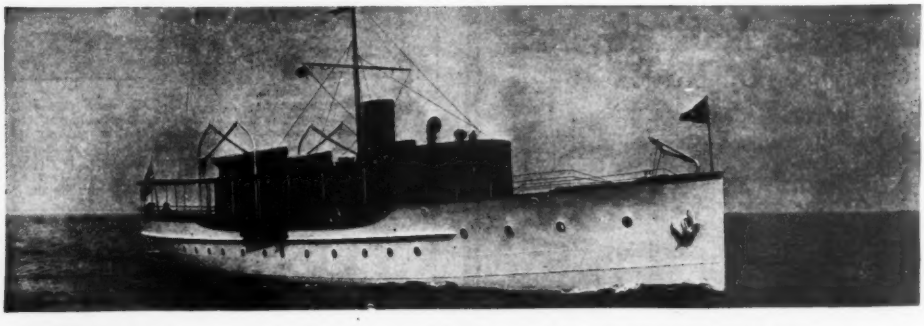
225 H.P. Sterling Dolphin, six-cylinder model, complete equipment, starter, generator, triple ignition, rebuilt, and guaranteed for year like new engine. Finest machine of its type on the market at extremely low price. BRUNS KIMBALL & CO., Inc., 50 West 17th Street, New York City.

FOR SALE—Finely appointed new hull, 59'x 12'6", double planked mahogany, finished bright. With suitable engines would make 50 m.p.h. Apply 173, care MoToR BoatinG.

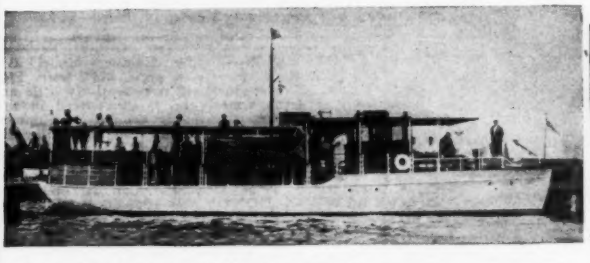
IF INTERESTED in boats, engines and equipment write A. M. DEERING, Monadnock Building, Chicago, Illinois.

FOR SALE

Standard Reverse Gear used on a 12 x 14 h.p. Ferro Motor. One Bronze shaft 11.8 x 8 ft. long. Best offer takes it. RIVERSIDE MACHINE TOOL WORKS, Hartford, Conn.



FOR SALE—Single screw steel Diesel powered yacht, length 93' 6", beam, 15'6", draft 6'0". Four owners' staterooms, crew accommodations for eight. 6-cyl. 100 h. p. Atlas Imperial Diesel Motor. Two 5 K-W Universal 110-volt lighting units. Equipment throughout very complete and fully found in all respects.



Matthews built single screw bridge deck compromise stern cruiser. Length 61', beam 13'6', draft 5', powered with a 6-cyl. Winton gasoline motor. Delco lighting unit. Heavily constructed seaworthy type of boat. Cruising speed about 11 miles per hour. Total sleeping accommodations for ten. Interior elaborately furnished and fully found in all respects.

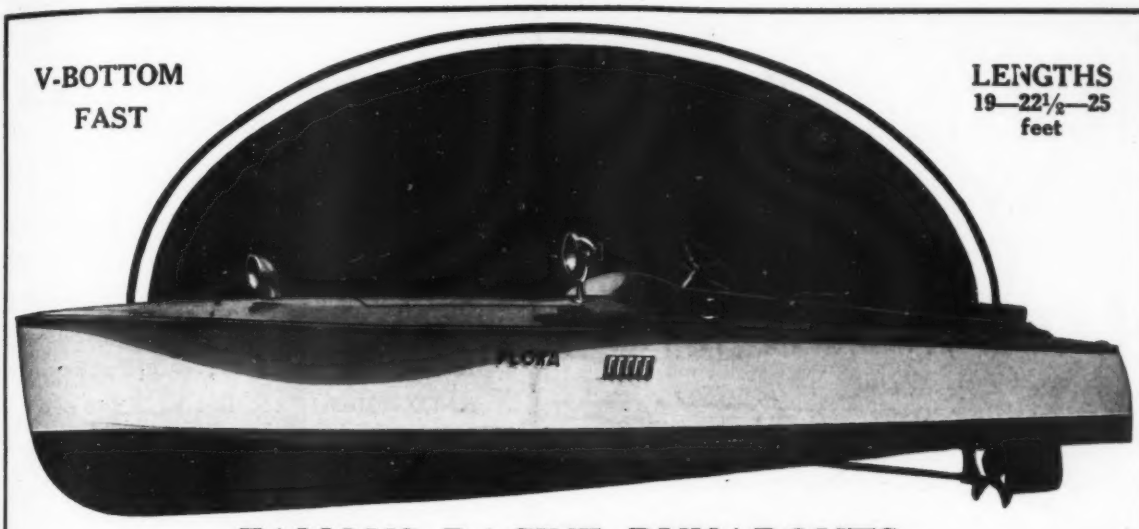
V-bottom all mahogany 40' express cruiser completely refinished. Two new L M 6 Hall-Scott marine motors now being installed. Speed 35 to 37 miles per hour. Now in Florida waters and available for immediate delivery. Owing to owner's inability to use this winter can be purchased at a very reasonable figure.

HACKER & FERMANN, Inc.
Naval Architects and Yacht Brokers
6304 E. Jefferson Avenue, Detroit

Advertising Index will be found on page 384

V-BOTTOM
FAST

LENGTHS
19—22½—25
feet



FAMOUS RACINE RUNABOUTS

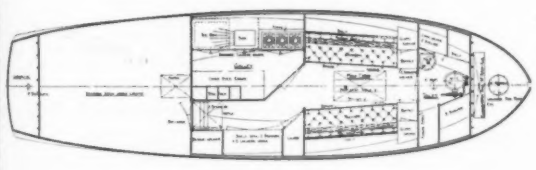
In stock for immediate delivery. One design, but built in three different sizes—19, 22½, or 25 feet.

From keel to last fitting this beautifully proportioned craft is thoroughly complete—ready to start right off and give day in and day out satisfaction.

The price is most remarkable when you consider it is a genuine RacineWis built craft.

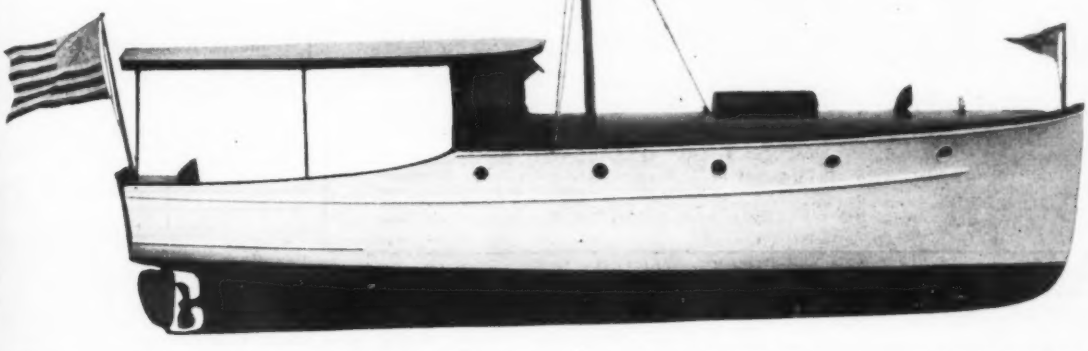
Complete specifications and blue print if you will advise us of the size interested in. Catalog furnished.

RACINE BOAT COMPANY, 1809 Holborn Street, Racine, Wis.



A New Cruiser

by NOCK
Raised Deck
36' x 10' x 2' 10"



THIS latest standardized cruiser creation by Nock is a big, able and seaworthy boat of harmonious lines. Inside, this new cruiser is just as comfortable as the outside is attractive. Study the arrangement plan above. Do you know of any thirty-six foot boat with more conveniently arranged accommodations or with so much roominess? Every convenience and refinement you would want on a custom built boat of this size are included on this fine cruiser. The galley is all enclosed, a very desirable and sanitary feature.

The 40 H.P. Red Wing motor is standard power equipment and gives a speed of eleven miles an hour. The structural details are arranged to allow the installation of a larger engine if desired.

Write today for detailed description and price.

FREDERIC S. NOCK, INC. *Naval Architects and Yacht Builders*
EAST GREENWICH RHODE ISLAND

Used by the Finest Cruisers, the Fastest Racers and by Merchant Vessels

BABY GAR IV BEATS 20th CENTURY

GAR WOOD, Inc., says:

"We have used MARBLEHEAD ANTI-FOULING PAINT on our BABY GARS and find it in keeping with the quality of our boats. We do not hesitate in recommending it very highly to any builders or owners of high class boats."

FOR CRUISING VESSELS

Long Life—Stays Clean—A Hard Slippery Surface

HIGHLY RECOMMENDED AND USED BY

J. Murray Watts, Cox & Stevens, John G. Alden, George Lawley & Son Corp., Consolidated Ship Building Corp., Herreshoff Mfg. Co., The Mathews Co., The Elco Works and many other famous naval architects, and by the most reliable ship and yacht yards.

It Has No Equal in Tropical and Semi-Tropical Waters

STEARNS-McKAY MFG. CO., Marblehead, Mass., U. S. A.

ENGINE BARGAINS

SCRIPPS—Model E-4.....45/70 h.p.
STERLING—Model FS.....110/145 h.p.
SPEEDWAY—Model Z.....35/44 h.p.
STURTEVANT—Model E-4...75/90 h.p.
KERMATH .....10 h.p., 2 cyl.
KNOX—Model G....12 h.p., Brand new
VAN BLERCK.....6 cyl., 100 h.p.
LOEW VICTOR.....4 cyl., 40 h.p.
LOEW VICTOR.....4 cyl., 20 h.p.

HOLT

MARINE ENGINEERING CORP.

611 West 125th St., New York City

FOR SALE—Bridge Deck Cruiser. 45 x 11. Motor new 1923. 5¾ x 7—62 H.P. Self starter—Speed 11 miles. Designed by J. Murray Watts. 3 cabins. Accommodations for 7. Electric lights—fans—arc search-light. Complete galley—dishes, etc. Mahogany house—cabins white enamel and mahogany trim. Varnished fender—outboard motor. New awnings 1924. FRANCIS X. McHUGH, 740 East 220th Street, New York City.

FOR SALE

Sterling four-cylinder, four-cycle 2-5 horse power, in excellent condition, recently overhauled and rebuilt, 600 R.P.M., 4⅝x5½, weight about 800 pounds, Bosch dual battery and magneto ignition, suitable for cruiser or open boat. Owner installing larger motor. Price, $450. Apply Box 166, care MoToR BoatinG, 119 West 40th St., New York.

150 H.P. Sterling Sea Gull, six-cylinder (current model), rebuilt, refinished, retested, brought up to date by Sterling Company, guaranteed for year like new engine. The best buy available today. BRUNS KIMBALL & CO., Inc., 50 West 17th Street, New York City.

Trimount Rotary Hand Bilge Pumps
All bronze composition. 4 sizes.
Capacities 6 to 20 gals. per min.
Require no priming.
Turn handle—create vacuum—get water at once.
TRIMOUNT ROTARY POWER CO.
294 Whiting Avenue East Dedham, Mass.
Mfrs. Hand and Power Pumps, High Vacuum Pumps, Whistle Blower Outfits

Pair 300 H.P. Sterling Dolphin model (current type), fully equipped, triple ignition, starter, generator, etc. Finest engine on the market. Will sell one or pair, guaranteed. BRUNS KIMBALL & CO., Inc., 50 West 17th Street, New York City.

FOR SALE—Sub-Chaser, 110x15½. Machinery and hull good condition. Located New York. Completely equipped and running, $2750. Suitable freight or passenger service. Box 170, MoToR BoatinG.

FOR SALE: High class combination house boat cruiser—48' x 15' beam, five very large rooms, bath and two toilets. Strongly built, rabbet seam hull. Interior all double panels, especially built for northern and southern cruising. Must be sold at once—Bargain—Pictures and plans sent. Can be seen any time. "WATONWAN," T. A. Kyle Shipyards, Fordham Street, City Island, N. Y.

WANTED — Small, comfortable cruiser, on Lake Erie. Box 172, care MoToR BoatinG.

BARGAIN—New Doman 4¼x6, 4 cylinder engines. Suitable for cruisers. Special prices. $188.00 and up. HUNTER BOAT CO., Dept. C., McHenry, Ill.

Four-cyl., four-cycle, with gears: 9 H.P. Universal, $165; 1924 Kermath, with starter-generator, $415; 40 H.P. Doman, $285; 40 H.P. Miller, $425; 50 H.P. Sterling, $450; 24 H.P. Regal, $425; Peerless, 4x6, $235, and others; also 40 H.P. Pierce-Bud two-cycle, $375. Miscellaneous: 6 H.P. Dunn, three-cyl., four-cycle, $45; 8 H.P. Frisbie, $135, one-cyl.; also large line of two-cycle and aviation engines. Send for list and state your power needs. Badger Motor Company, Milwaukee, Wis.

ENGINES FOR SALE

Two 200 horse power, 8 cylinder, Model M, Van Blerck engines in perfect order. For further information apply to G. Edward Osborn, P. O. Box 1696, New Haven, Conn.

FOR SALE—4-cyl., 4-cycle 100 H.P. Hall-Scott motor, practically new, double ignition, suitable for speed boat or race car. Cost over $3,000; price, $550. Seaholm Machine Co., 139th St. and Morris Ave., Bronx, N. Y. Telephone: Mott Haven 3976 or Fairbanks 3823. Will consider trading for touring car.

FOR SALE—Hacker designed "V" bottom hull, 26x66 feet, built of mahogany, in the very best manner. This hull used very little, launched Aug. 2, 1925. No reasonable offer refused. Alfred W. Rowland, 31 Thames Street, New London, Conn.

Advertising Index will be found on page 384

SAIL AND MOTOR YACHT EQUIPMENT

from the

House of Willis

The New Display Building of the E. J. Willis Co.

In our new building we have installed all of the latest facilities for handling orders for Marine Hardware and Yacht Equipment in an efficient manner.

Greatly enlarged stock bins, more floor space and new elevators enable us to give you even better service than in the past.

A new 72-page booklet will be ready at the Motor Boat Show featuring Bargains in U. S. Navy material and numerous Willis leaders in Sail and Motor Yacht Equipment.

Whatever You Want We Have It!

From the smallest nut, bolt, cleat, clamp or lock to such articles as buoys, anchors, life preservers, etc., you will find what is needed among the thousands of items in the $200,000 stock of "The House of Willis." Try Willis first—it will save time and money.

The Highest Quality — **The Lowest Prices**

Efficient Service! Courteous Assistance!

As fine a crew as ever manned a ship is ready to assist you in selecting merchandise, giving advice when asked for it and giving always the best value for your money. Trained, capable men who understand ships and an organization equally efficient assure prompt attention in filling and executing orders.

The E. J. Willis Co. represents and carries the stock of the following prominent manufacturers:

ATLANTIC PACIFIC MFG. CO., LIFE PRESERVERS
BETSY ROSS FLAG CO.
BLOOD BROS., UNIVERSAL JOINTS.
BRYANT & BERRY PROPELLER CO.
CAILLE OUTBOARD MOTOR CO.
CORBIN SCREW CO., CORBIN TYCOMETER
E. J. LIST ADJUSTABLE SHAFT LOGS—ONE WAY CLUTCHES.
GYES GEAR CO.
HUBBARD H. ERICKSON & CO.
HYDE WINDLASS CO.
KAINER & CO.
L. O. KOVEN CO.
OBERDORFER BRASS CO., WATER PUMPS.
PERKINS MARINE LAMP CO.
PRENTISS, WABERS STOVE CO.
A. B. SANDS & CO.
TAYLOR INSTRUMENT CO.
THOMAS CLOCK CO.
THOMAS LAUGHLIN CO.
UPSON-WALTON CO.
WATERBURY CLOCK CO.
WILCOX, CRITTENDEN & CO.

LOOK FOR THE WILLIS BOOTH AT THE MOTOR BOAT SHOW

NAVAL ARCHITECTS & YACHT BROKERS

Thomas D. Bowes, M. E.
NAVAL ARCHITECT AND ENGINEER
Offices:
Lafayette Bldg., Chestnut and Fifth Sts.
PHILADELPHIA, PA.

Burgess, Swasey & Paine
NAVAL ARCHITECTS
585 Boylston St., Boston 17, Mass.

COX & STEVENS
Naval Architects and Engineers
Yacht Brokers
25 Broadway, Cunard Building
(Morris St. Entrance), New York City
Telephone: 2700 Whitehall

S. S. CROCKER, JR.
NAVAL ARCHITECT
and YACHT BROKER
Expert Supervision of Construction
Tel. Main 0385
333 Washington St. Boston, Mass.

THOMAS S. HANSON
Formerly General Manager, The Elco Works, Bayonne, N. J.
Yacht and Motor Boat Brokerage
19 West 44th Street New York
Telephone: Murray Hill 8678

WALTER COOK KEENAN
NAVAL ARCHITECT
802 Liverpool & London & Globe Bldg.
New Orleans, Louisiana
Sail and power yachts. Houseboats and commercial vessels. Surveys made in all Gulf Ports.
I have a large number of yachts of every description for sale, and some for charter.
Cable address: "Walkeen"

MILLS & MILLS
YACHT AND SHIP BROKERS
FORT LAUDERDALE, FLORIDA
Supervision Repairs

FREDERIC S. NOCK, INC.
Naval Architects and
Yacht Builders
EAST GREENWICH, R. I.
STORAGE REPAIRS
MARINE RAILWAY

Yard and Shop

Continuous Show in New York

It undoubtedly is of interest to all yachtsmen to know that a complete line of Sterling marine engines, ranging from the 12-15 h. p. two-cylinder Neptune up to the 300 h. p. six-cylinder Viking engines, including the Trident, Dolphin, Sea Gull and Coast Guard engines are on display in New York at all times.

There is also on display a complete line of Kermath engines ranging from the single cylinder 3 h. p., up to and including the very popular six-cylinder 65 and 100 h. p. machines.

Bruns Kimball & Co., West 17 Street, New York City, are distributors for these popular and standardized lines of engines and want to let the boating public know that these machines are on continuous exhibition. All yachtsmen who get to New York therefore have an opportunity of personally inspecting these machines at all times of the year. An hour of anyone's time interested in boating will be time well spent by paying a visit to this very complete exhibit of marine engines. It is the largest that can be found anywhere in America. They will receive courteous attention and expert discussion on any problems they might have from the personnel of that organization.

Canada Challenges for Hydroplane Trophy

Miss Brown, the Canadian challenger for the Rudder International Trophy, 151-inch hydroplane class, was successful in winning this trophy at the regatta held by the Bay Head Yacht Club in August. Immediately after these races a challenge was sent to the Ottawa Power Boat Association on behalf of Frank and Chris Ripp for the contest during 1926. In due course the time and place for the contest during 1926 will be announced, and it will be necessary to send a delegation of American boats to Canada in an attempt to retrieve this trophy.

"Super" Outboard for 1926

Ole Evinrude, at the head of the Elto Outboard Motor Company, has each successive year since the organization of this company, announced the addition of original and distinctive features to his Elto light twin outboard motor. It has become known throughout outboard motor circles that Mr. Evinrude has spent most of his days for the past three or four months creating and developing his ideas in a specially constructed workshop located on the shores of a quiet lake in Wisconsin. It is also known that early this summer he equipped himself with practically every type of rowboat in order to make the most thorough tests of his new model under varying conditions.

Rumors are now about that the father of the outboard will soon make public one of the most important announcements ever heralded to outboard motordom. Naturally this rumor is causing no little excitement among outboard motor fans because of their confidence in the seasoned designer. They are consequently placing their expectations high for 1926 as far as the Elto light twin is concerned.

Advertising Index will be found on page 384

JOHN H. WELLS, INC.
NAVAL ARCHITECTS
Service that's different
BROKERAGE SUPERVISION
Telephone: Murray Hill 3128-9
347 MADISON AVE., NEW YORK

MacMillan Selects Johnson Motors for Expedition

When Commander D. B. MacMillan, famous explorer, hoisted anchor in the harbor of Wiscasset, Maine, and set sail for the Polar region he had on board six Johnson Outboard Motors for use in propelling the smaller boats through the icy waters of the Arctic. Three of these light-weight twin cylinder motors will be used by Geologists, assigned to the expedition by the National Geographic Society, Washington, D. C., for patrolling the seas in quest of scientific data of the northland. A Mullins steel boat will be propelled by two other motors of the same type for Walrus hunting. The remaining motors will be used as a personal power plant by the famous explorer when making short cruises through the narrow passageways of ice.

Both Arctic ships, the Peary and Bowdoin, will carry Johnson outboard motors, they being the only type motor used on this expedition for propelling small craft. Careful study was necessary in selecting a motor that would stand the terrific hardships and cold weather of the north. The extremely light weight of the Johnson Motor was also a big factor in Commander MacMillan's selection, for cargo weight and space are very important considerations when outfitting an expedition of this kind.

Economical Cruising

Four men recently made an interesting cruise in the 32-foot cruiser Naad of the South Shore Power Boat Club, Chicago. The boat is owned by F. G. Daniels and a vacation trip of 740 miles was made from Chicago, along the east shore of Lake Michigan thence along the harbors and summer resorts of the east shore to Mackinac Islands. On the return trip the course followed was along the east shore of Green Bay, through the Sturgeon Bay Canal, and thence along the west shore of Lake Michigan back to Chicago. In all some 740 odd miles were covered, with several non-stop runs of more than eleven hours. The longest continuous run was 15 hours and 40 minutes. Throughout the entire trip the wonderful and faultless performance of the little 32 h.p. Red Wing Thorobred engine was noteworthy. On several of the runs very rough weather was encountered, but no anxiety was felt, because of the confidence in the engine. It never gave a moment's trouble, and all that was necessary was to press the starter button and to see that the oil and fuel supply was kept up. A very careful record was kept of the mileage, speed and fuel consumption, and it was found that exactly three gallons of gasoline was used per hour, which, on a ¾-throttle, provided a cruising speed of 9 miles. If necessary an additional mile and a half was still available, but there was no occasion to call on the motor to do more than necessary.

'Tis Summer Down In

MIAMI BEACH

AT MIAMI BEACH you can follow your favorite summer time sport in a different environment throughout the winter. Here in the semi-tropics it is never too cool and never too warm,—just an everlasting summer of many June days the entire year.

Come to Miami Beach now while the season's activities are at their height. Brilliant social functions and gala events of every sort hold sway during February and March to be capped by the Annual Southern Regatta, on March 19th and 20th, featuring speed boat races for the Fisher-Allison Trophy, the Dodge Memorial Trophy, and other prizes. Make your hotel reservations now, by addressing

The Carl G. Fisher Hotels

Nautilus : Flamingo : Lincoln : King Cole

MIAMI BEACH, FLORIDA

Boating	*Fishing*	*Golf*	*Tennis*
Bathing	*Skating*	*Polo*	*Motoring*

The speed boat race course in front of the Hotel Flamingo Miami Beach

FLORIDA'S beckoning only a few hours away. Beckoning with a finger all sunlight and happiness.

There's freedom there—freedom from the hurly-burly humdrum of city living. Clean, sunlit air. Sleep that goes down as deep as the seaweed—and stays there eight hours!

A wide sweep of silver beach where you lie with your eyes half shut in the sunlight, breathing in salt air that sets your blood atingle.

And golf—*Florida golf*. Fairways before you like ribbons of green, stretching on to the dying light of a tropic sunset.

The famous Flagler System hotels, all operated on the American plan, are effectively distributed along the Florida East Coast. At St. Augustine are the Alcazar and the Ponce de Leon—the Ormond at Ormond-on-the-Halifax—the Royal Poinciana at Palm Beach (Breakers re-building)—at Miami, it's the Royal Palm—at Key West, the Casa Marina—and the famous Long Key Fishing Camp at Long Key.

Through Pullman trains and through sleepers from important cities to all East Coast resorts, including Key West via the wonderful Overseas Extension, for Havana, Cuba.

Booklet containing list of hotels and other information supplied upon request.

FLORIDA EAST COAST RAILWAY COMPANY
FLORIDA EAST COAST HOTEL COMPANY

(Flagler System)
2 West 45th St.
NEW YORK

Phone Murray Hill 4411

General Offices
St. Augustine
Florida

The EAST COAST of FLORIDA

Yard and Shop

Inter-Lake Association Elects

Commodore A. A. Schantz, the popular Detroit yachtsman, was elected Commodore of the Inter-Lake Yachting Association at the annual meeting in Toledo, December 5. The Commodore has previously served as Vice-Commodore of the Association, and is very active in its affairs. Despite the fact that he is the chief executive of the largest passenger steamboat line on the Great Lakes, Commodore Schantz, nevertheless, finds time to attend the frequent regattas during the summer on the lakes, and also those in Florida during the winter. In addition to this office, Commodore Schantz is honored with many other important places. He is the Vice-President of the American Power Boat Association, as well as Chairman of innumerable committees in other clubs.

The Loew-Knight Six

An engine which has created considerable interest recently is the Loew-Knight Six, built by the Loew Manufacturing Company, Cleveland, and is of the Silent Knight sliding sleeve valve type. The makers report a highly gratifying record of sales for this type of engine since they introduced it into the general marine field early this year.

The six-cylinder model is an exceptionally clean-cut and efficient marine power plant. The six-cylinders are cast en-bloc, separate from the crankcase, and because of the elimination of all ears for valves or valve cages provide a pleasing, symmetrical design. Removable cylinder heads are dome-shaped, insuring a perfect combustion chamber. Crankshaft is drop-forged, has seven main bearings, and is drilled for oil leads to all bearings. Connecting rods are drop-forgings, I-beam section; oil tubes carry lubricant from the crank pin bearings to the piston pins, under the pressure. Pistons are aluminum; each piston is fitted with three rings, the bottom ring being oil through the piston wall to the crankcase.

An eccentric shaft, seated in seven bearings, operates the sleeve valves by means of small connecting rods. One single strand of link belt silent chain operates the eccentric shaft, generator shaft, and magneto shaft.

Lubrication is furnished by a dry sump system. Two pumps are used; one pump draws the oil from the engine base and through filter to the oil reservoir mounted on forward end of engine; the other pump forces the oil to the bearings under pressure of 50 pounds. An oil cooler in the reservoir consists of a series of tubes, through which the cooling water is circulated before entering the cylinder jackets.

Reverse gear is of the planetary, ball-bearing type. Thrust bearing consists of a double row of annular ball bearings, which absorb thrust in both directions, and also relieve crankshaft of all thrust.

Intake manifold is provided with hot spot, and exhaust manifold is completely water-jacketed.

The engine complete weighs 1,260 pounds and is equipped with Robert Bosch dual magneto, Schebler carbureter, positive rotary type water pump, and 12-volt starting and lighting system, either Robert Bosch or Leece-Neville.

Advertising Index will be found on page 384

Miami

The World's Greatest Winter Resort

THE "WONDER CITY" OF AMERICA

29 years old, and growing faster each year, with ever increasing popularity.

There's a Reason—

CLIMATE: "Yes. It is ideal."
BEAUTY: "Yes. It is enchanting."
OUTDOOR SPORTS: "Yes. World's greatest variety."
BUSINESS: "Yes. Opportunities in every branch of business.
AGRICULTURE: "Yes. Our back country affords many diversified crops which pay well."
STABILITY: "Yes, and the same is amply proven by the investment and improvements being carried on by the Big Men and the Big Companies of the country."

Florida East Coast Ry. expending for improvements	$15,000,000
Clyde Steamship Co., new ships for Miami service	5,000,000
Florida Electric Light & Power Company	25,000,000
Seaboard Airline Railway extending to Miami	5,000,000
Bell Telephone Company, extensions	2,000,000
New buildings in the Miami zone, 1925	100,000,000
New School Buildings financed	2,000,000
New Courthouse and City Hall	2,500,000
Street and Sewer Construction	2,500,000
New Water Works	1,100,000
New Causeways and Bridges	2,200,000
Expending on Realty Developments within ten miles of Miami	200,000,000
Investment of the United Cigar Stores Co.	5,000,000
County and State Road Departments expending on Dixie Highway	3,000,000
City of Miami on Park improvements	2,000,000
U. S. Government on Harbor improvements	1,000,000
City of Miami on Harbor improvements	500,000
Total	$474,400,000

Transportation facilities being greatly increased.
Florida East Coast Railway being double tracked.
Seaboard Airline Railway being extended to Miami.
Clyde Steamship Company operating three fine ships from New York direct to Miami—3 days a week.
The Baltimore and Carolina Steamships from Baltimore and Philadelphia.
The Merchants and Miners "Berkshire" direct from Philadelphia to Miami.
The Admiral Line operating the steamship "H. F. Alexander" on a five-day schedule direct from N. Y.
Also service to the Bahama Islands by a number of ship lines.

Does the above look like a "Bubble"?

Bank Deposits, 1924	$46,000,000
Bank Deposits, 1925	$210,000,000
Gain, 457 percent.	

Does that look like a "Bubble"?

We expect to entertain 300,000 visitors this winter.
We invite YOU to be one of this number. We'll do our best to give you good accommodations and also to provide entertainment for you.
46 new Hotels and 315 new Apartment Houses completed for this season.
Write for free handsome booklet, full information.

MIAMI CHAMBER OF COMMERCE
MIAMI, FLORIDA

Miami Beach is Calling You ~

JULIAN E O'DONNELL

To the annual Motor Boat Regatta on Biscayne Bay, March 19th and 20th.

To the world's winter playground with it's miles of inland waterways, palm-shaded and fanned by Gulf Stream breezes ~ To miles of delightful ocean beach where bathing in January is as joyous as it is in June ~

To hundreds of hotels, apartments, homes, casinos, schools, churches and shops ~ To golf, polo, tennis, canoeing, sailing, fishing and, not far away, horse-racing ~ To one continuous round of sunshine, happiness and health.

CHAMBER OF COMMERCE

Miami Beach, Fla. A.C. Terry, Secretary

SAVANNAH
GEORGIA

Sail South to Summer

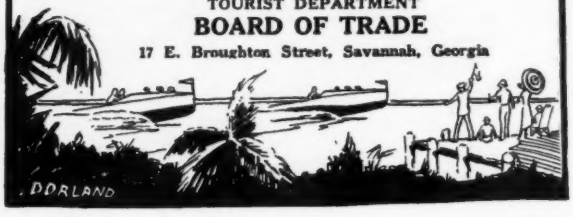
To that even tempered, twelve-month summer that never grows extreme . . . that attracts the country's pleasure craft to Savannah's fresh water landlocked harbor, a few miles from the sea.

For the yachtsman, turned landsman, are charming tourist hotels, sports of great variety and interesting attactions. Hunting and fishing, for instance—golf on America's oldest course.

Investments in Savannah property are secure. National highways, railroads and splendid coastwise passenger steamers meet at Savannah.

For illustrative booklets and road information, address

TOURIST DEPARTMENT
BOARD OF TRADE
17 E. Broughton Street, Savannah, Georgia



Sanford
FLORIDA

ONE hundred and ninety-eight miles inland from the sea lies a beautiful lake—Monroe, by name—and on it, Sanford, the City Substantial with a magnificent yacht basin, a remarkably heathful climate and attractions of every description.

Sanford is an important port for ocean steamers with direct outlet to the sea via St. Johns River—the Nile of America. It is also an attractive residential city and an enterprising business center for Florida's rich central section.

For the tourist are free band concerts, golf, land and water sports, and a new lakefront tourist hotel. Sound conservative investments. Excellent railroad service and good motor roads.

For information and booklet address

SANFORD CHAMBER OF COMMERCE
Sanford, Florida

DORLAND

Content, a 32-Foot, Double-Cabin Cruiser

(*Continued from page* 82)

All seams to be caulked with cotton, payed with white lead paint and then filled with white lead putty.

Planking to be planed smooth and fair and well sandpapered before painting.

Deck Beams:—To be of oak sawn to a crown of 3 inches in 6 feet. Main beams at forward and after ends of cabin trunk to be 2 by 2 inches. Auxiliary beams to be 1¼ by 2 inches.

Beams to be notched down into upper edge of sheer clamp.

Oak fore and aft carline, 1½ by 2 inches to be fitted for length of cabin trunk opening with inboard face 6 inches in from outside of planking. To be bolted to sh er clamp with spacer blocks between as shown on plans.

Main Deck:—To be of white pine, ¾ inch thick, tongue and groove stock. The planksheers should be 6 inches wide, sawn to shape.

Deck to be covered with No. 10 canvas laid in thick white lead paint, or soft Jeffries marine glue, thoroughly stretched and fastened with copper tacks. Edge of canvas to be turned down over edge of planksheer and covered by sheer moulding; edge around cabin trunk to be turned up on inside of cabin trunk coaming and covered with a facing piece of mahogany.

Cabin Trunk:—Trunk sides to be 1⅛ inch Phillipine mahogany, white pine or fir, as directed by Owner. Mahogany to be used if sides of trunk are to be finished bright and the pine or fir if they are to be painted.

Trunk sides to be fitted to top of deck after canvas is laid and to be through bolted to deck carline. Corners should have rabbetted corner posts, rounded on the outside.

House deck beams to be of oak, steam bent to shape of crown, sided 1 inch and moulded 1½ inches. Beams to crown about 12 inches in 6 feet 6 inches as shown.

House deck to be 5/8 inch tongue and groove pine covered with No. 10 canvas in one piece, laid in thick white lead paint or soft marine glue, well stretched and fastened with copper tacks.

Companionway slides on aft end of forward cabin and forward end of aft cabin to be of mahogany with panelled mahogany doors in cockpit.

Port lights in sides of cabin trunk to be sleeve type with outside rings, 6 inch opening. Placed in sides of trunk as shown, also two ports in forward end of forward cabin and two in aft end of aft cabin.

Cockpit:—Cockpit floor beams to be of oak, 1¼ by 2 inches, extending full width of boat and supported at ends by a 1¼ by 2 inch shelf fastened to the frames at proper height. Hatch to be framed over engine as shown.

Cockpit floor to be of ⅞ inch tongue and groove pine, covered with No. 10 canvas and made water tight at sides of hull.

Engine hatches to be in two sections fitted with piano hinge on outboard sides and landing on center strong back over motor. Edges fitted with flat brass strip to make a rabbetted joint.

Scuppers should be fitted through side of hull with outlets just above water line, at each corner of cockpit to provide drainage for rain or seawater.

Seats to be fitted at aft, on either side of after companionway, as shown. Space under seats to be utilized as storage lockers.

Spray board of 1 inch mahogany fitted above coaming at each side of cockpit, as shown on plan. Hinged gangway openings to be provided for.

(Hand rail and canvas weather cloth may be substituted for spray board, if so desired by Owner).

Awning:—Awning frame to be made of ¾ inch galvanized iron pipe with wood slats supported by stanchions as shown.

Forward Cabin:—To be arranged with transom berths on either side as shown on plans with storage lockers under. Back cushions to be fitted to pipe frames so that they will swing up to form upper berths.

Toilet room forward of forward cabin to have a marine water closet of approved make and wash basin as shown. Wash basin to be connected to fresh water tank in bow and to drain overboard.

Galley arrangement at aft end of forward cabin as shown with platform for the stove on starboard side, with dish racks above, and ice chest and sink on port side. Sink to have pump connected to fresh water supply and both sink and ice box fitted to drain overboard.

(*Continued on page* 150)

Advertising Index will be found on page 384

The Jewel of the St. Johns

VENETIA — northern Florida's sub-division masterpiece—not a development in the ordinary sense of the word, but a master engineer's ideal of city planning. A 500-acre extension of Jacksonville's most aristocratic St. Johns River water front, with navigable waterways to the Atlantic Ocean. Its architecture restricted to the Mediterranean and the Adriatic—the atmosphere and art of the old world. If you are interested in a North Florida homesite *de luxe* VENETIA will interest you.

Venetia has its own Country Club with 18-hole golf course by Donald Ross. The links immediately adjoin an exclusive section of residential waterways. Venetia lies also between two other aristocratic country clubs both by Donald Ross and regarded as the most perfect championship golf courses in Florida.

Venetia has its own deep water Yacht Basin. Its land locked waters offer throughout from 12 to 20-foot draft with ample room for the largest pleasure craft to anchor and swing. The entire vicinity of this basin is of the highest type of residential development and the immediate approach to Venetia's gondola basin and system of ornamental waterways.

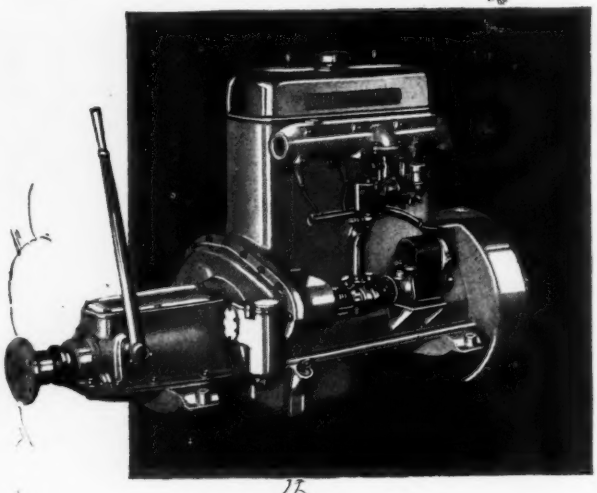
May we send You Descriptive Literature?

CONSOLIDATED DEVELOPMENT and ENGINEERING CORPORATION, INC.

15 Julia Street

JACKSONVILLE, FLORIDA

Wisconsin Marine Motors include White Cap "4" and "6" and the sturdy "A-M," an L-head model.



This Year *Buy Surety!*

Your White Cap, bought for its sparkling motor-car "pep"—its "More Power per Cubic Inch"—is, too, the *surest* bet in your boat. That instant, smooth, eager surge of power at your open throttle's invitation, comes from the very things that make White Cap RELIABLE.

Close fit. Tolerances taught by fine-car practice. Balance. Plenty of metal—and the right kind—at every point. And back of it all, the overhead-valve design, developed to full efficiency by Wisconsin.

This year, buy surety. Your search for it need go no further than White Cap.

MORE POWER per CUBIC INCH

Write for details. Mention size and type of your boat. Boat Builders, get the facts on Wisconsin's better way to buy boat power.

Wisconsin Motor Mfg. Co.
Milwaukee, Wis.

WHITE CAP "4" and "6"

Content, a 32-Foot, Double-Cabin Cruiser

(*Continued from page* 148)

Companionway steps to be fitted with solid back to cover engine flywheel and to be made so as to be easily removable to give access to motor.

All joiner work in forward cabin, toilet room and galley space to be of Phillipine mahogany, which shall be stained, varnished and rubbed to dull finish.

After Cabin:—To be arranged with two berths and bureau as shown on plans. Berths to have lockers, or drawers, under as directed by Owner. Berth fronts and bureau to be of mahogany. Companionway steps to be mahogany.

Water Tank:—A cylindrical galvanized iron tank, 14 by 36 inches, to be installed in fore peak, fitted with filler pipe to deck and connected to supply pumps in toilet room and galley.

Steering Gear:—Rudder blade to be a ¼ inch brass plate, shaped as per plans, Rudder stock to be a 1½ inch bronze shaft, split to take rudder blade. Heel bearing fitted to skeg at bottom of rudder.

Rudder port to be a piece of extra heavy brass pipe threaded through keel. Inboard end fitted with a brass pipe cap drilled to fit the rudder stock to serve as a stuffing box.

Rudder quadrant of galvanized iron, 14 inches radius, fitted to head of rudder stock.

Steering gear to be a Carpenter Model G Steerer, column model, cruiser type with 18 inch wheel and engine controls.

Tiller ropes to be of ¼ inch diameter extra flexible galvanized wire tiller rope led over large sheaves from rudder quadrant to steering gear; to be fitted with a turnbuckle for taking up slack.

Skeg on bottom of keel forming heel bearing for rudder to be of bronze.

Machinery Installation:—The engine shown on the plans is a Model S Frisbie, four cylinder, 4 inch bore and 5 inch stroke, rated as 18-25 H. P. at 600-900 r.p.m. This engine has been selected as the size and type of motor that is suitable to give a cruising speed of from ten to twelve miles per hour and should give smooth, quiet and satisfactory operation at a minimum of expense and attention. A four cylinder 35 H. P. Kermath can be installed without any change of shaft line and there are several other makes of engines of about the same size, dimensions and power which may be installed to suit any owner's personal preference.

Engine to be carefully lined up and bolted to engine beds. Propeller shaft to be American Brass Company's Tobin bronze of proper diameter to fit engine coupling, about 10 feet, 6 inches long; aft end to be properly tapered to take propeller wheel.

Stuffing box to be fitted on inboard end of shaft log and plain stern bearing fitted on outboard end of shaft log. Bronze strut of special pattern to be fitted from under side of stern timber to top of skeg as shown on plans, with babbited bearing for shaft.

Propeller to be a three blade solid bronze wheel of 20 inches diameter and proper pitch, as specified by engine manufacturer, to suit engine selected.

Gasoline supply tank to be a cylindrical, galvanized iron tank of Koven or other approved make, 20 inches diameter and 60 inches long (70 gallons capacity) fitted with wash plates. To be located at aft end of engine compartment, set in oak saddles and securely strapped to saddles and chocked to prevent shifting. Filler pipe to be made gas tight to screw deck plate. Vent pipe to be carried out through side of hull. Supply pipe to engine to be of heavy copper tubing with shut off valve at tank and also at carbureter. Suitable gasoline filter to be fitted in supply line.

Exhaust line to be of copper pipe or of galvanized iron pipe, as directed by Owner, and of proper size to suit engine installed. To be carried aft and out through stern transom about 6 inches above water line.

Engine cooling water to discharge out through side of boat about 6 inches above water line and to be fitted with branch line into exhaust fitted with valve so that amount of water going into exhaust may be regulated.

Spark and throttle controls to be connected to controls on steerer column. Clutch control to be fitted control lever in cockpit.

All wiring and details of engine installation to be complete and done in a first class manner as approved by Owner.

Fittings:—A 14 inch brass manhole plate to be fitted in deck at bow to give access to storage space for anchor cables. Also a 16 inch brass manhole plate in after deck over steering gear.

(*Continued on page* 152)

You'll Like the DART

The better, moderate priced RUNABOUT

THE DART is built for the boat lover who can distinguish between quality and extravagance, and who prides himself on his good taste. That's why we say you'll like the DART.

The DART is a thing of beauty, graceful in lines and perfectly proportioned. But, first of all, it is a very serviceable, durable and extremely seaworthy runabout. Just as its name suggests, the DART is a fast boat and gives a speed of 35 miles per hour with its reliable 8-cylinder V-type Curtiss engine.

Every part of the DART, the hull and power plant, is characterized by superior workmanship and the infinite attention given to structural details. It is the one high class runabout that gives you big value for your money, because it's built to last through years of hard usage. Although the DART has all the fineness of a custom built runabout, it is not an expensive boat.

Write today for price and complete details.

The DART 1926 model is now ready. This model has a six-passenger forward cockpit. A folding top is optional at a nominal extra cost.

INDIAN LAKE BOAT COMPANY

350 East High Street Lima, Ohio

Home Comfort "Aboard"

No one thing contributes more to the pleasure of cruising than comfortable chairs and beds. This "at home" comfort is built into every piece of Gold Medal Folding Furniture.

"GOLD MEDAL"
TRADE MARK REG. U.S. PAT. OFF.
FOLDING FURNITURE

The durability, ease of folding and comfort of the Gold Medal cot is known the world over. The new No. 35Y Yacht type Arm Chair has been developed to meet the condition peculiar to motor boat use. Its handsome mahogany finish, khaki seat and back and brass metal parts harmonize with the appointments of the finest cruisers. Large enough for a big man yet folds to space 26¼" x 16½" x 8". As *all* metal parts are of brass it defies salt water. Weighs but 14½ lbs. Many builders furnish them as standard equipment.

There is a Gold Medal cot, chair and table for every need—in Home, Camp, Golf, Boat and Yacht clubs and on all types of boats. If you don't know the name of the nearest dealer write us for his name—also handsome illustrated catalog.

AT THE SHOW—

You'll find "Gold Medal" displayed by leading marine supply houses. Whether you're a boat owner, builder or club representative, this comfortable folding furniture will interest you.

Gold Medal Camp Furniture Mfg. Co.
1754 Packard Ave. **Racine, Wis.**

No. 1 Cot Frame of selected hardwood, cover of extra quality 12 oz. (34 inch) double filled special woven, brown duck. Open 6 ft. 6 in. long; 27 in. wide; 16¼ in. high. Weight only 17 lbs. Folds to 3 ft. 3 in. long by 4 in. by 6 in.

Content, a 32-Foot, Double-Cabin Cruiser

(*Continued from page* 150)

Brass mooring bitts to be bolted to deck at bow and two on after deck as shown on plans. A small windlass may be used at bow in place of the mooring bitt if desired.

Flag pole sockets to be fitted at bow and stern and mahogany flag poles furnished by Builder.

Flush mooring chocks to be fitted in rail at bow and two open chocks at stern as shown on plans.

One anchor of about 50 pounds with 150 feet of ¾ inch diameter manila anchor cable. Also a light anchor of about 25 pounds for use in fair weather.

A complete set of running lights as required for Class 2, whistle, bell, fog horn, fire extinguishers and a life preserver for each person on board must be carried as required by U. S. Steamboat Inspection Service.

Painting and Finishing:—The outside of the hull to be properly smoothed and sandpapered before any paint is put on.

Bottom to have three coats of approved anti fouling marine paint of make directed by Owner.

Topsides to have at least four coats of lead paint of color directed by the Owner.

Sides of cabin to be finished bright or painted as directed by Owner.

All canvas decks to be painted two coats of buff color and then at least three coats of best spar varnish.

All mahogany bright work to have a light coat of stain deck paint.

Sheer stripe to be done in gold leaf in narrow cove cut in sheer strake.

Name in gold leaf letters on stern.

Inside of hull to be painted two coats of lead paint of color directed by Owner. Mahogany work in cabins to be finished with at least three coats of varnish, the final coat to be rubbed to a dull finish. Painted wood work in cabins to be finished with an ivory tint, final coat rubbed to a dull finish.

Cabin Equipment:—Cabin equipment such as cushions, carpets, blankets, linen, dishes, galley stove, etc., will be furnished by the Owner.

Delivery:—The boat is to be delivered to the Owner afloat at the yard of the Builder complete and ready to operate, after a satisfactory trial trip.

Whiz, an Outboard Speedster

(*Continued from page* 83)

⅝ inch cedar, with additional cleats of ⅝ by 1½ inch spruce, to take the clamps of the engine. All the frames should be notched for the seam battens, which will be 5/16 by 1⅝ inch cedar. This must be done carefully, so that the center of the batten will follow the joint between the planks as they are applied, and all joints between chines, keel, battens, and the planking should be well prepared with marine glue, before securing. There will be two floor strips 5/16 by 4 inches, practically the entire length of the hull, to serve as a walk way. All fastenings for the planking should be brass screws, where it secures to the frames, and light copper nails closely spaced, between the frames, and securing the plank to the battens. All screw heads shall be slightly sunk into the planking, and the holes properly puttied over. Nail heads can be kept flush.

After the hull is completed, it should be painted both inside and out to suit the fancy of the owner. In addition all laps of wooden members, which are made in the hull during the construction, and which are not glued, should be well painted before being secured. The outside of the hull will look best if painted in white, with varnished trim. The ¾ inch half round spruce molding at the sheer line, can also be varnished, while that portion of the hull below the waterline can be painted with a contrasting color of prepared bottom paint.

One point to remember, and which will cause discomfort and annoyance if not watched for, is the cutting of the limber holes in the bottom frame member, adjacent to the keel. These should be cut in before the hull is assembled, and will permit the bilge water to flow through to a low point, where it can be pumped out.

Blue print copies of these drawings, to a scale of 1½ inches to the foot, can be secured at moderate cost, by addressing the Editor, MoToR BoatinG, 119 West 40th Street, New York, N. Y.

Advertising Index will be found on page 384

PRESENTING

The DODGE WATERCAR

IN FOUR NEW MODELS

See These Wonderful Values
At the Motor Boat Show

For 1926, the Horace E. Dodge Boat Works announces production of the Dodge Watercar in two sizes, and four models, with choice of 30 H. P. and 90 H. P. motors. All models are luxurious craft of ample seating capacity, handsomely designed and finished, and bearing the Dodge reputation for dependable, seaworthy performance. Compare the appointments, mechanical equipment, and price of these de luxe boats with any others at the show. You will pronounce them the greatest values ever offered in the fast, light runabout field.

On Display at Space A-1 New York Motor Boat Show

HORACE E. DODGE BOAT WORKS
INCORPORATED
DETROIT, U.S.A.

The New Single Cockpit

Model 422 *with Dodge Marine Motor*

(30 H.P.)

$2475

Add $150 for Top
Side Curtains.
All

Speed 20 Miles Per Hour

Driven as easily as an automobile, Model 422 Dodge Watercar is an ideal craft for the owner seeking fast dependable transportation at moderate cost. Five passengers are accommodated with ease in the roomy single cockpit. All controls are at the driver's finger tips. Hull is of finest African mahogany, with lustrous piano finish. Not a nail is used in the entire hull. All fastenings are either bolts or brass screws. A self-bailer, automatic in action, keeps the interior of the boat dry, thus eliminating the use of hand pumps.

HORACE E. DOD
DETR

Advertising Index will be found on page 384

Watercar Is Better Than Ever

Model 822 *with Dodge-Curtiss Marine Motor*

(90 H.P.)

$2975

Extra for Shipping Cradle.

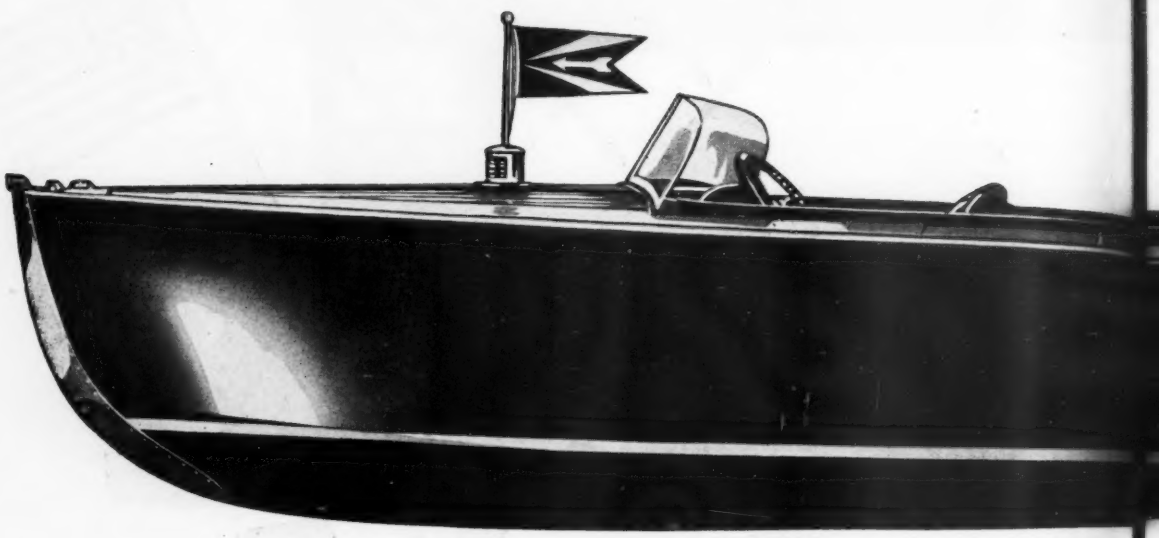
Speed 37 Miles Per Hour

To obtain a high grade runabout equipped with a powerful light-weight motor such as the Dodge-Curtiss, it was formerly necessary to place an order for a specially constructed boat. Now, quantity production provides this combination at a sensationally low price. With a speed of 37 miles per hour, Model 822 is the fastest stock runabout on the market today. Its ample reserve power is delivered at exceptionally low motor speed, thus insuring long life and dependable economical performance. Unusually dry at high speeds, the full power of the Dodge-Curtiss equipped Watercar may be employed at will, without discomfort to passengers.

OAT WORKS, Inc.

S. A.

You Can Now Have



Model 426 *with Dodge Marine Engine*

(30 H. P.)

$2925

Speed 15 Miles Per Hour

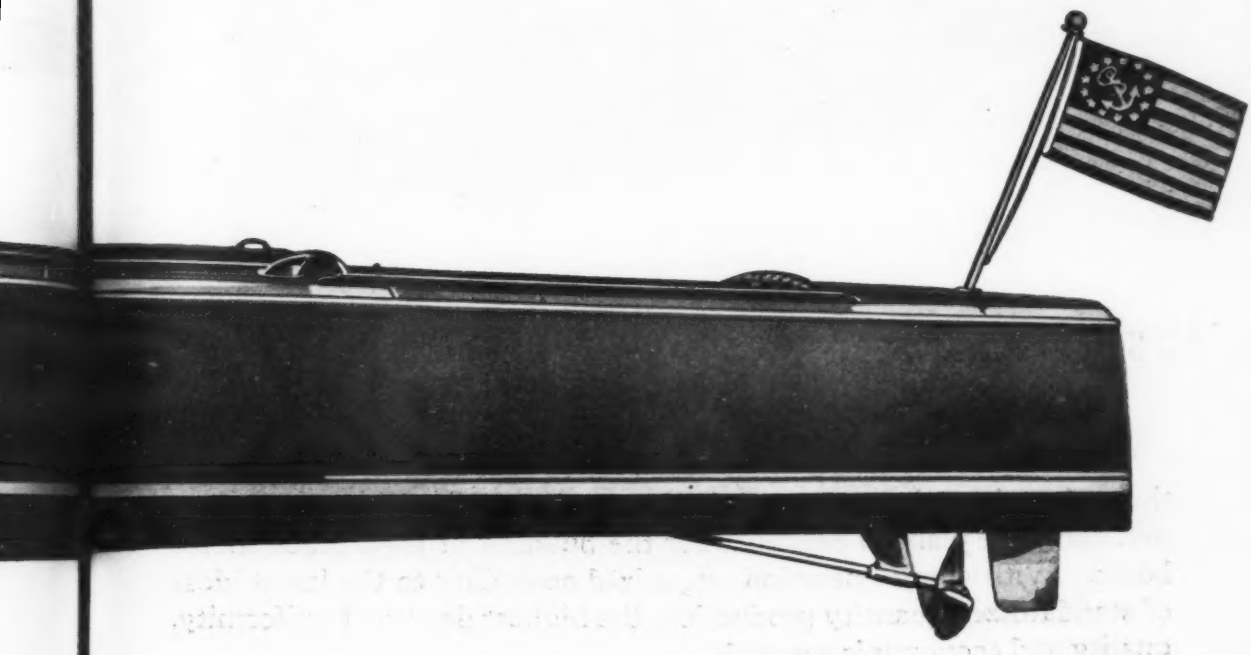
A widespread demand for a Watercar of greater seating capacity has been answered with the new Double Cockpit Model for 192 production.

Measuring 25 feet 11 inches over all, with beam of 6 feet 7 inches this handsome Watercar has built-in accommodations for nine passengers.

Six persons including driver are given ample room in the forward cockpit. The after cockpit seats three, but extra chairs for two more passengers may be added without discomfort.

Advertising Index will be found on page 384

ouble Cockpit Watercar



Model 826 *with Dodge-Curtiss Marine Engine*

(90 H. P.)

$3475

Speed 35 Miles Per Hour

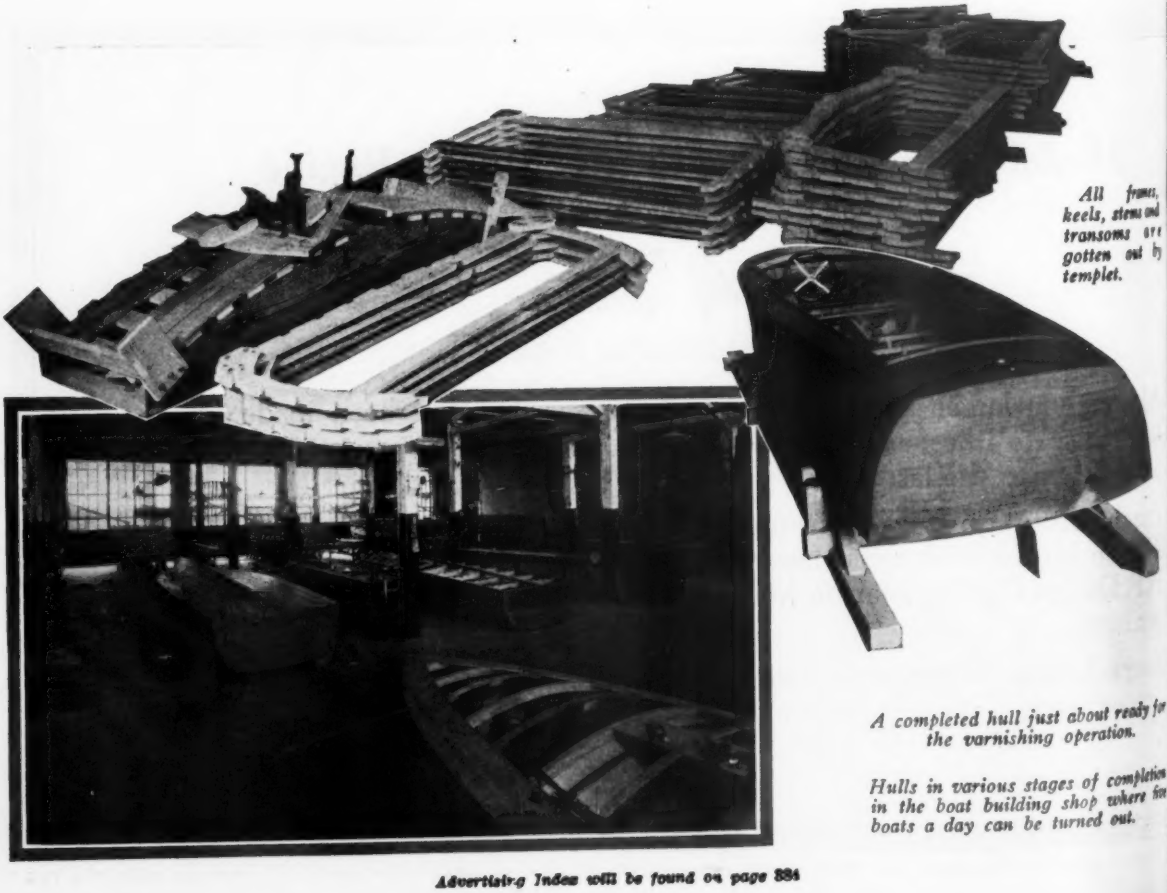
Although a larger and roomier boat, no sacrifice has been made in beauty. The lines are low, racy and attractive. Equipment is complete down to the last detail.

Purchasers may select this model fitted with the standard Dodge Marine Motor with approximate speed of 15 miles per hour or the 90 H.P. Dodge Curtiss Marine Motor with approximate speed of 35 miles per hour.

Every Dodge Watercar is completely equipped for salt water without extra charge.

A hundred thousand miles of dustless highways await you in your Watercar.

The story of the Dodge Watercar is only half told when the boats themselves have been described. Back of these is the most modern and complete plant in existence for the building of high grade motor boats. With every operation organized according to the latest ideas of standardized quantity production, the highest degree of uniformity, quality and economy is assured.



All frames, keels, stems and transoms are gotten out by templet.

A completed hull just about ready for the varnishing operation.

Hulls in various stages of completion in the boat building shop where ten boats a day can be turned out.

Advertising Index will be found on page 334

YOUNG & HALL, Inc.

Distributors of

DODGE WATERCARS

in

New York

Several Other

Eastern States and

the Greater Part of

FLORIDA

Immediate Delivery From Stock
On All 1926 Models

Terms Arranged

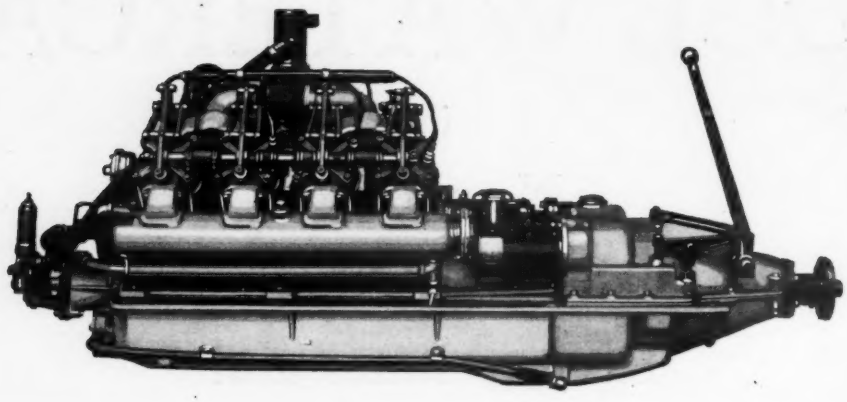
DEALERS—BOAT BUILDERS—YACHT BROKERS
Write, wire or telephone today for franchise details.
Several desirable territories open.

YOUNG & HALL, Inc. 522 Fifth Avenue NEW YORK CITY
Telephone: Murray Hill 8160-8161

Florida Branch: Young & Hall, Inc., 1611 Franklin St.
Tampa, Fla. Phone Tampa 3881.

Distributors of Sterling Engines for the State of Connecticut

The New DODGE-CURTISS Marine Motor



Specifications

8 Cylinders, V. Type, 4-inch Bore, 5-inch Stroke, develops 90 Horse Power. Speed 300 to 1600 R.P.M. Full Force Feed Oiling System, operating with dry sump.

Complete Electrical Equipment, including Generator, Starting Motor, Storage Battery, Ignition Equipment. Wiring and Switches. Price $1000.00

Immediate Delivery of Watercars at Miami

The Horace E. Dodge Boat Works announces that adequate stocks of Dodge Watercars are now maintained at Miami, insuring immediate deliveries to Florida purchasers.

By communicating direct with the factory, we can arrange delivery at a time and place you specify.

Deferred Payments may be arranged for if desired

Write for completely descriptive booklets and name of nearest dealer

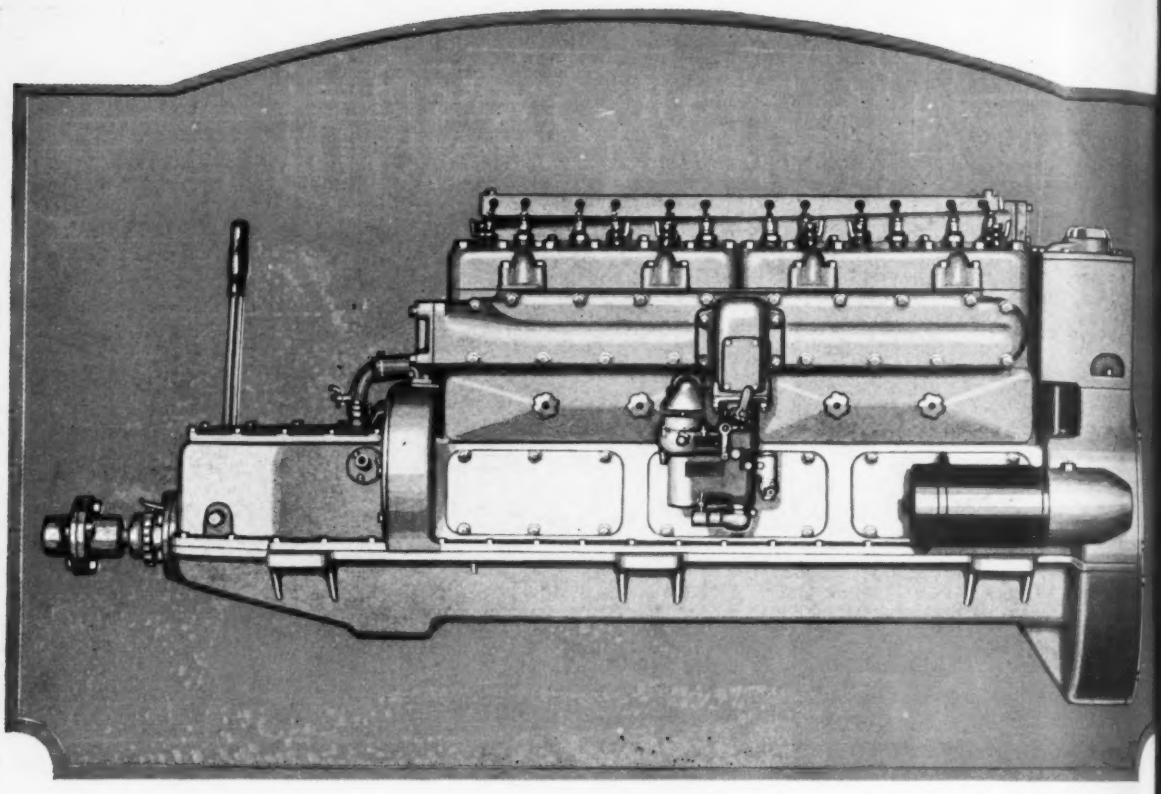
HORACE E. DODGE BOAT WORKS
INCORPORATED
DETROIT, U.S.A.

Advertising Index will be found on page 384

KERMATH

So great is the adaptability of Kermath motors and so varied the range of motor sizes—there is a Kermath for use in every type of boat powered by a marine motor.

Kermath engines are specified by 80% of the boat builders as standard equipment.



The Famous Kermath Six

For those who want the last word in a big powerful, superfine marine engine, the new Kermath Six fits all of your most exacting requirements. It is made to appeal to the most fastidious and the most experienced.

This Six is a wonder performer—flexible—and as fast as lightning. Full up-to-date equipment.

Made in two types, both of 495 cubic inches displacement, the high speed model develops from 80 to 100 H.P. at from 1500 to 1850 R.P.M., and the low speed model develops 40 to 65 H.P. at from 600 to 1200 R.P.M. The bore is 4⅜ inches and the stroke 5½ inches.

Designed according to the latest and best engineering practice, this job is clean-cut, of simple design—no unnecessary parts—everything accessible.

Large production makes possible very attractive prices.

65 H. P. to 100 H. P., $1350 and $1450

KERMATH MANUFACTURING COMPANY

5879 COMMONWEALTH AVE., DETROIT, MICH.
11 WELLINGTON ST. E., TORONTO, ONT.

Advertising Index will be found on page 384

KERMATH

SPECIFICATIONS

Model 100—100 H. P.

Speed—1500 to 1850 R.P.M.

Cylinders—Bore 4⅜ inches, stroke 5½ inches. Displacement, 495 cubic inches.

Weight—1075 pounds.

Size—Only 70 inches in length.

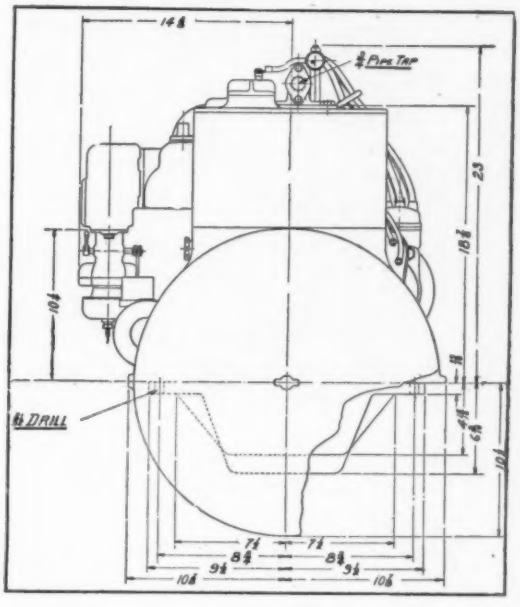
Model 65—65 H. P.

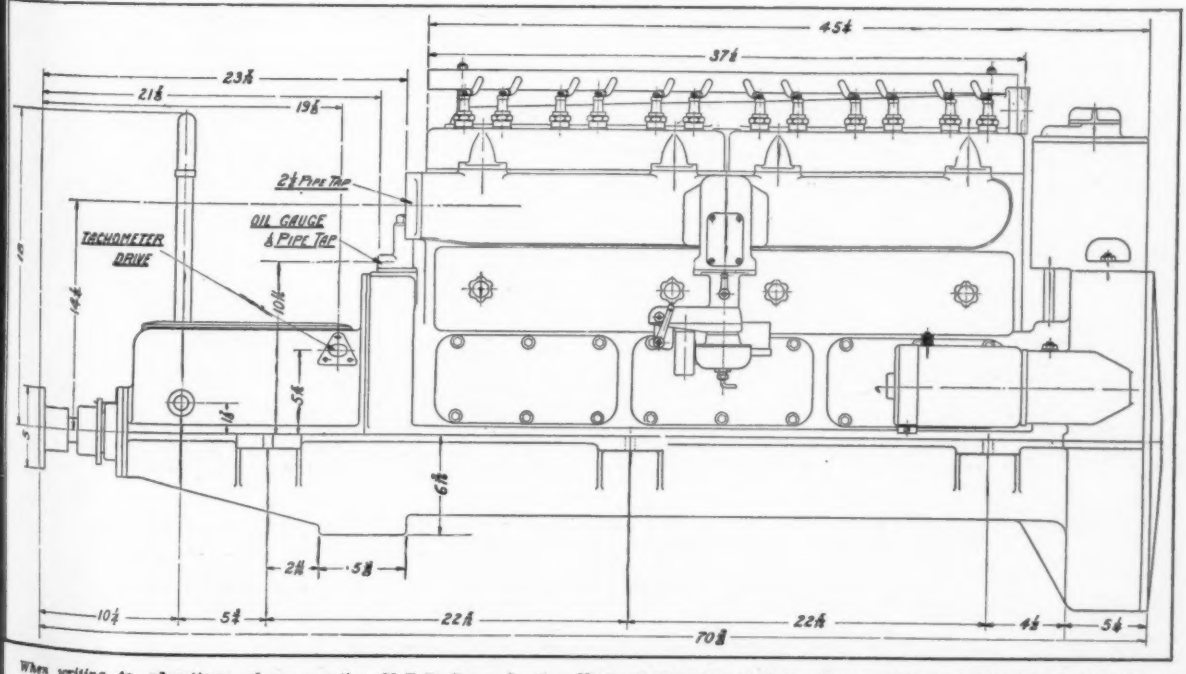
Speed—600 to 1200 R.P.M.

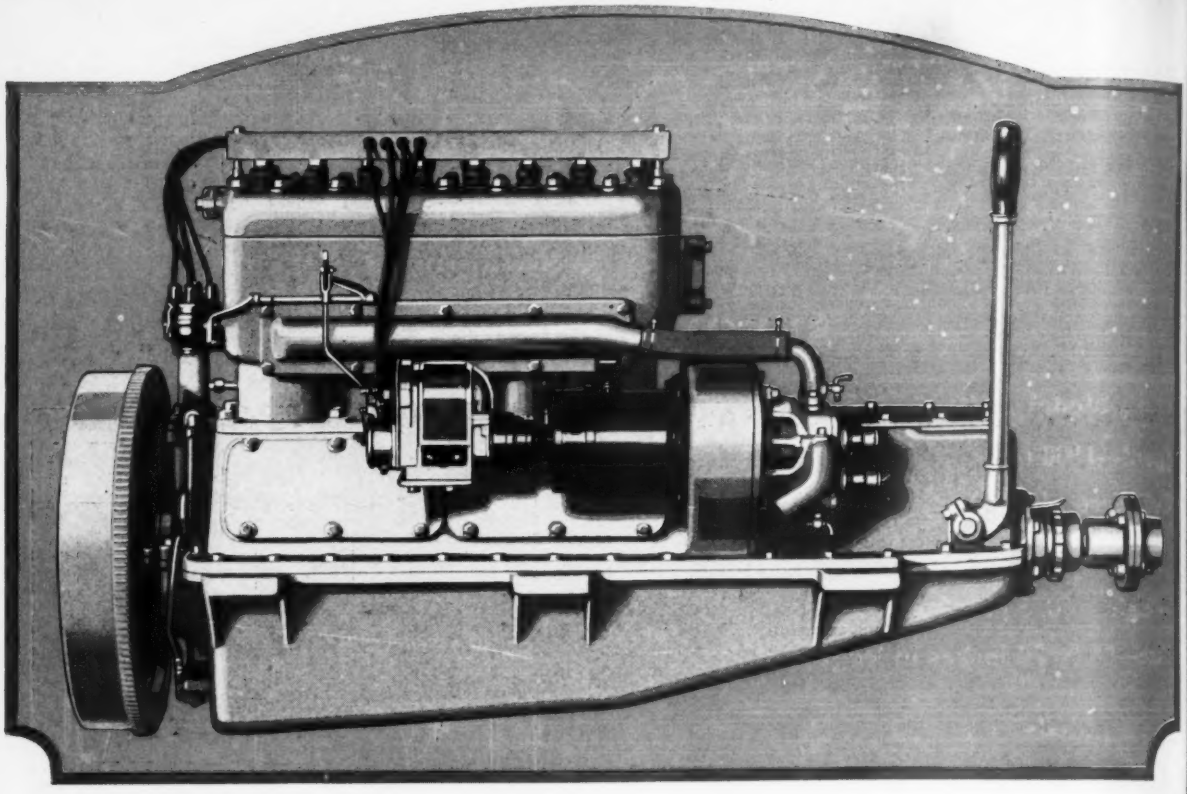
Cylinders—Bore 4⅜ inches, stroke 5½ inches. Displacement, 495 cubic inches.

Weight—1500 pounds.

Size—Only 70 inches in length.







Standard Kermath Four

The well known Kermath Four hardly needs any introduction or explanation. For years this superior power plant has been found in various types of leading boats in most of the leading watering places throughout America — in fact, throughout the world.

An inexhaustible worker—always on the job—as reliable as a calloused sea captain — economical under the most trying circumstances, this well designed—well built Kermath Four is a joy to the most experienced boat fans and a delightful pleasure to all.

We can refer you to thousands of satisfied users.

If you are looking for a thoroughly reliable marine motor, you should get more facts about the famous Kermath Four.

Six Distinct Models, 12 to 70 H. P., from $470 to $1150

KERMATH MANUFACTURING COMPANY

5879 COMMONWEALTH AVE., DETROIT, MICH.
11 WELLINGTON ST. E., TORONTO, ONT.

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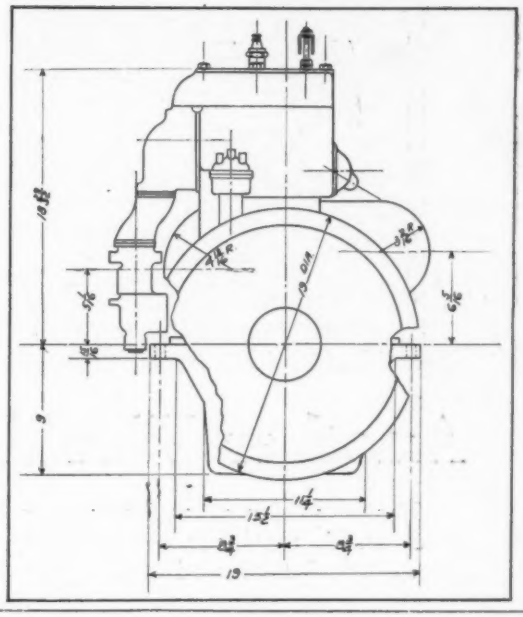
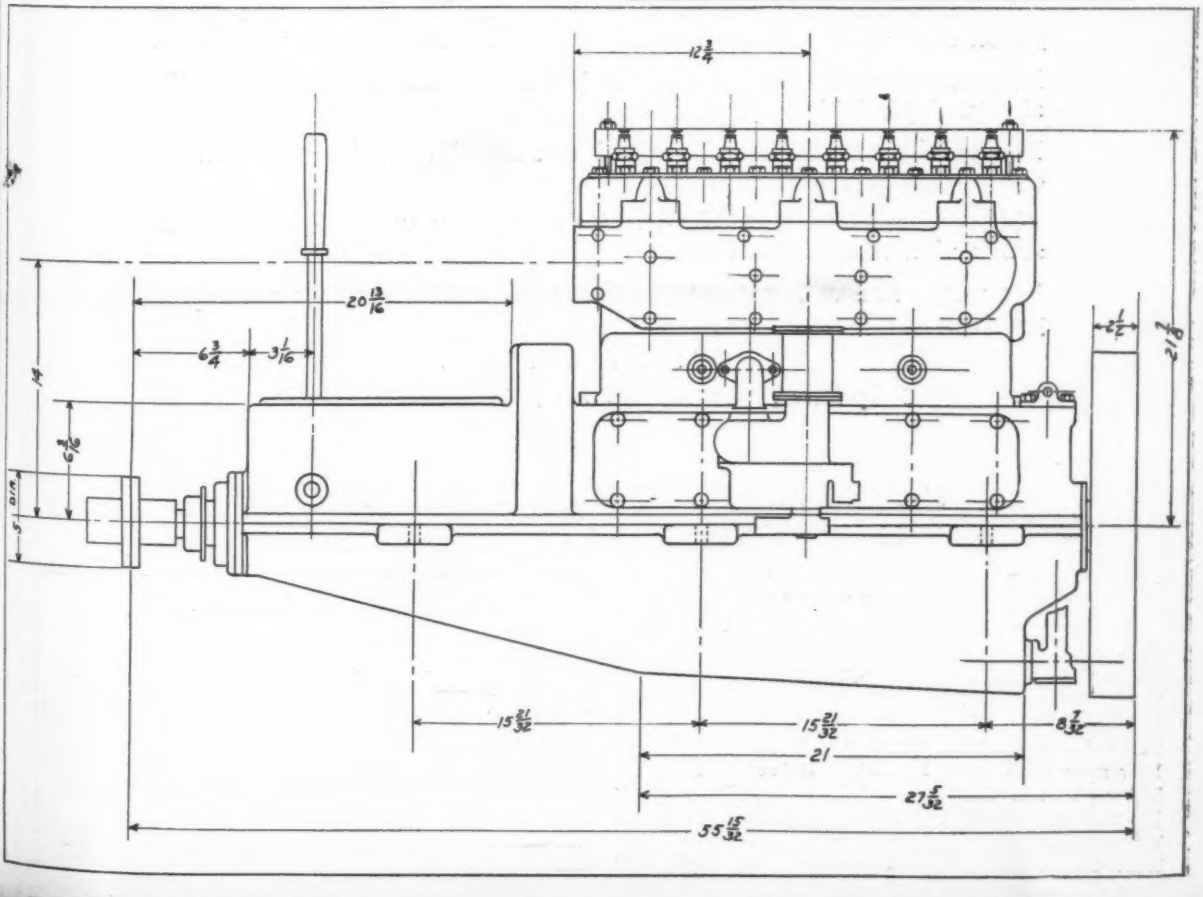
KERMATH

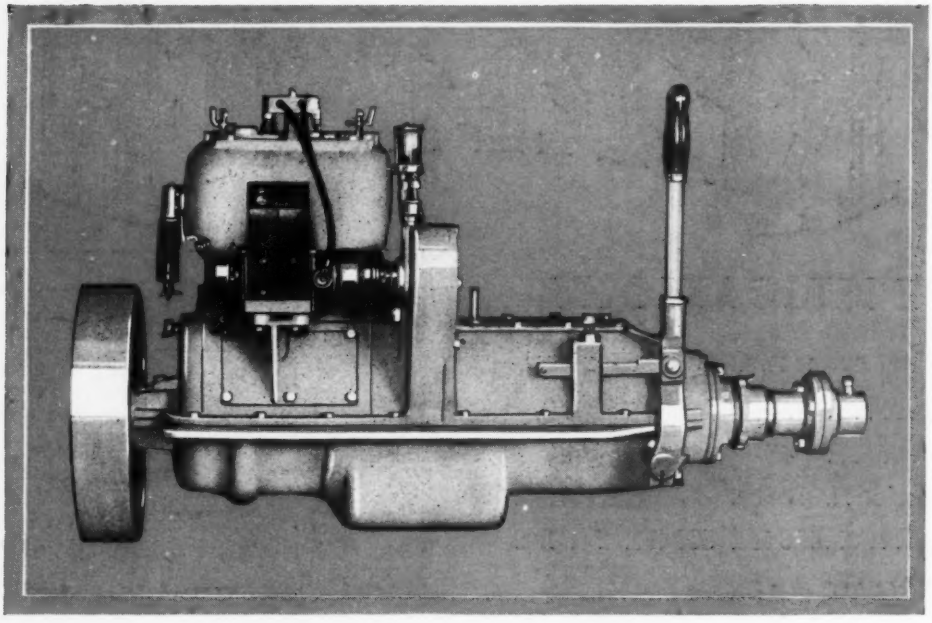
SPECIFICATIONS

	12 H.P.	16 H.P.	20 H.P.
Bore	3½"	3¾"	4"
Stroke	4"	4"	4"
Compression	50 lbs.	60 lbs.	65 lbs.
Weight	470 lbs.	500 lbs.	535 lbs.

	35 H.P.	50 H.P.	70 H.P.
Bore	4⅜"	4⅜"	4⅜"
Stroke	5½"	5½"	5½"
Compression	60 lbs.	70 lbs.	82 lbs.
Weight	950 lbs.	700 lbs.	675 lbs.







Another World-Famous Kermath

If you prefer a smaller motor yet one that is without an equal in its class, Kermath recommends the famous two-cylinder, four-cycle models. This design comes in two separate sizes.

For downright efficiency, for squeezing every bit of power out of every gallon of gasoline, the Kermath Twin has an outstanding reputation.

Rugged, powerful, fool-proof, here is a motor that is always obedient, always dependable, and always exceedingly economical.

Made of the same high-grade materials as the higher priced Kermaths and designed by the same skilled engineers.

This design has been standard with us for years and has given complete satisfaction to thousands of enthusiastic Kermath owners.

We would like to tell you more about this world-famous marine power plant.

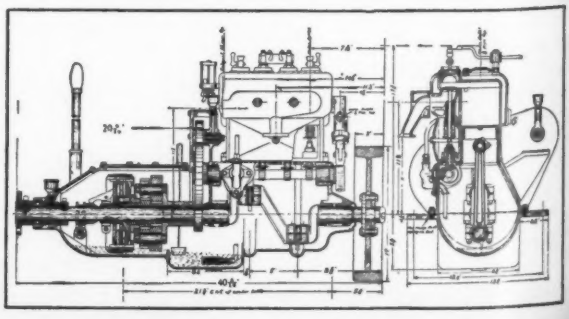
Built in Three Models,
2 Cylinder, 4 to 10 H. P., from $295 to $315

KERMATH MANUFACTURING COMPANY

5879 COMMONWEALTH AVE., DETROIT, MICH.
11 WELLINGTON ST. E., TORONTO, ONT.

SPECIFICATIONS

	4-5 H.P.	6-8 H.P.	8-10 H.P.
Bore	3½"	3¾"	4"
Stroke	4"	4"	4"
Valve diameter, clear	1¾"	1¾"	1¾"
Connecting rod bearings	1⅜"x2¼"	1⅜"x2¼"	1⅜"x2¼"
Forward main bearings	1⅜"x3½"	1⅜"x3½"	1⅜"x3½"
Rear main bearings	1⅜"x3"	1⅜"x3"	1⅜"x3"
Piston pin	⅞"	⅞"	⅞"
Piston rings, 3½"x¼"	3 rings	3 rings	3 rings
Water inlet	⅜"	⅜"	⅜"
Water outlet	⅜"	⅜"	⅜"



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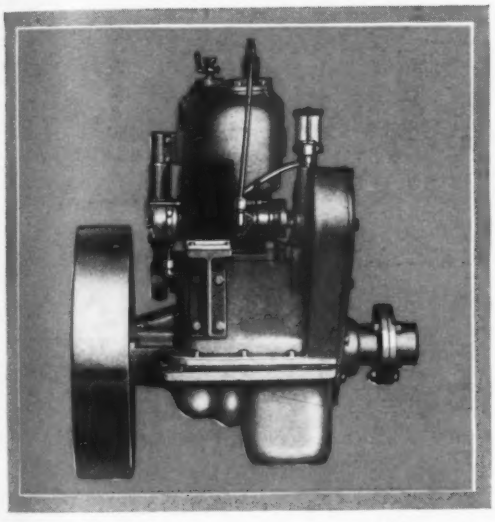
KERMATH

A Superbly Fine Small Motor



When it comes to the smallest type of Kermath, the 1-cylinder 3 to 4 H.P. designs, this motor has equal standing and an equal reputation for long life, economy and durability along with some of the finest and most expensive motors in the market. This 1-cylinder model, like all Kermaths, is built of the finest materials and under the most exacting conditions.

Designed for small boats, takes up little space, needs virtually no attention and can be efficiently operated by both the experienced and the inexperienced, with equally fine results.

With vibration cut to a minimum and light reciprocating parts, this motor with just common-sense attention should last a lifetime. Large production on this model also permits of an unusually low price.

3 H. P.,—$135

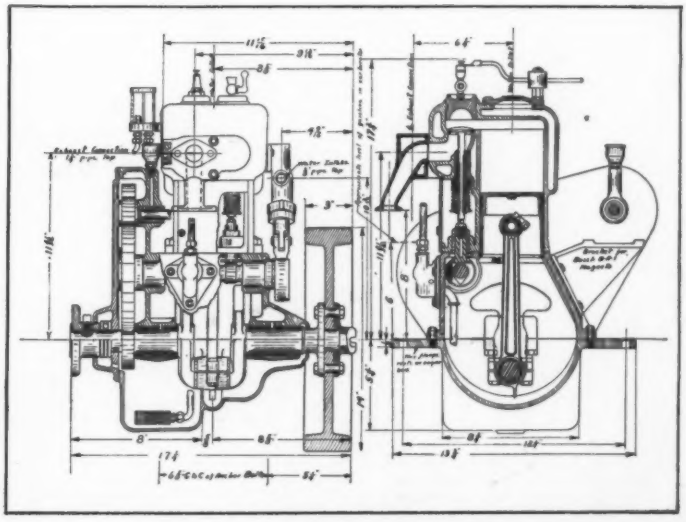
KERMATH MANUFACTURING COMPANY

5879 COMMONWEALTH AVE., DETROIT, MICH.
11 WELLINGTON ST. E., TORONTO, ONT.

SPECIFICATIONS

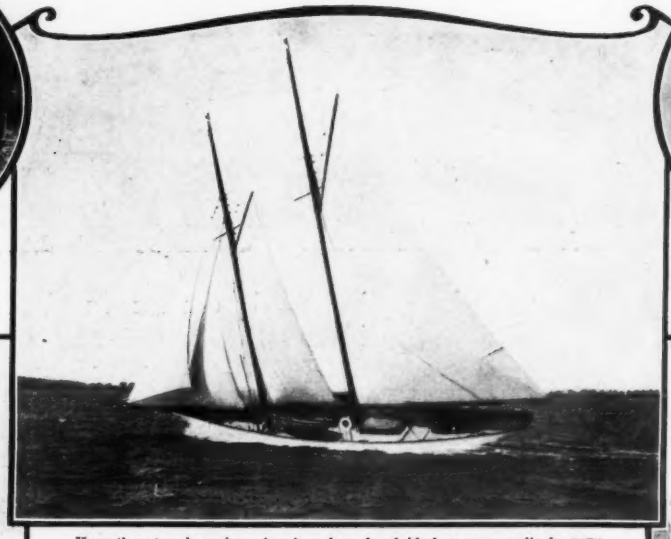
3 to 4 H.P.

Bore	3¾"
Stroke	4"
Piston	Cast Iron, 3 rings, 4" long
Connecting Rod	Drop Forged, 9" centers
Forward Main Bearing	1⅜"x3½"
Rear Main Bearing	1⅜"x2¼"
Connecting Rod Bearing	1⅜"x2¼"
Piston Pin Bearing	⅞"x2½"
Water Pump	Bronze Plunger Type
Valves	Iron Heads, Hardened Steel Stem, 1¾" Clear Diameter
Oil Pump	Bronze Plunger Type
Carburetor	Mayer
Magneto	Bosch with Impulse Coupling
Crankshaft	Drop Forged Counterbalanced, 40 point Carbon Steel
Flywheel	14" Diameter, 3" Face
Weight	175 lbs.



There Is a Kermath Motor For Every Boating Purpose

Here is a Canadian runabout, roomy and comfortable, built by Ditchburn, with a speed of 21 miles per hour. This 35-foot craft is powered with the truly well-performing six-cylinder 100 horse power Kermath.



Kermath motors in various sizes have been found ideal as power units in many of the finer sail yachts. Here is a smart auxiliary schooner, owned by Henry Bodman of Detroit, who has discovered the real meaning of dependability in a marine motor in the six-cylinder 65 horse power Kermath.

The typical modern high speed runabout is ideally powered with the 100 H. P. Kermath Six. This is a 26-foot double cockpit runabout designed by John L. Hacker. Speed over 30 miles per hour.

Gozo boats from the Island of Malta. Many of these crafts are powered with sturdy Kermath four-cylinder 35 horse power motors, that have already proven their worth in the waters of the Mediterranean.

The Banfield Sea Skiff is a sporting boat that displays real ability in any kind of water. It is unusually seaworthy, with accommodations for four or five passengers. The Kermath six-cylinder 65 horse power was again picked as standard installation in these fine crafts for outstanding performance and adaptability.

The Matthews Company who produce this beautiful 32-foot cruiser standardize on the 65 horse power heavy duty Kermath six-cylinder motor. There is seldom any engine trouble from these smooth, powerful, well qualified motors.

A Kermath Always Runs

KERMATH

Kermath Manufacturing Co.
5879 Commonwealth Ave., Detroit, Mich.
11 E. Wellington St., Toronto, Ont.

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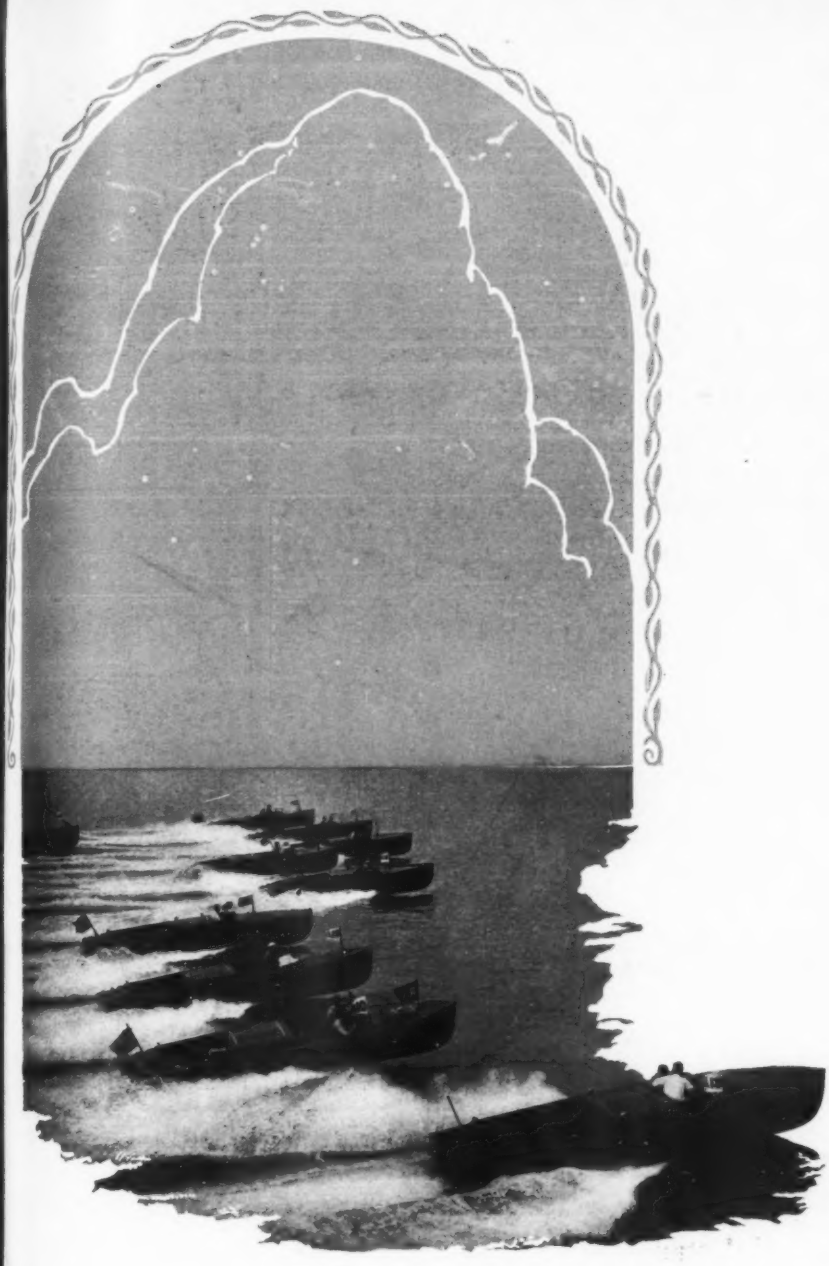

Announcing the New CHRIS-CRAFT *for 1926*

ALGONAC CHRIS CRAFT MICHIGAN

Wrought by men skilled in the Art of Boat Building and Design

The Chris Smith organization still holds the record of having produced the world's fastest speed boats. More, they have turned this hard won experience to practical account. For three years past, Chris Smith & Sons have been building a beautiful standardized Chris-Craft mahogany runabout. A boat unequalled anywhere for price, performance and appearance.

The Chris-Craft possesses all the qualities of an ideal runabout. It offers abundant power and speed; it combines rare riding comfort with an unequalled sense of security. Extreme ease of handling is one of the inbuilt features to make the twenty-six foot Chris-Craft the perfect family runabout.

The smart appearance of the Chris-Craft finds favor in everyone's eyes. The boat is marked for its trimness. Every line bespeaks well conceived design. Its highly finished mahogany decks and glistening hull mark the Chris-Craft as the perfect product of the boat builder's art!

CHRIS SMITH & SONS BOAT CO.

ALGONAC — LARGEST BUILDERS OF FAST RUNABOUTS — MICHIGAN

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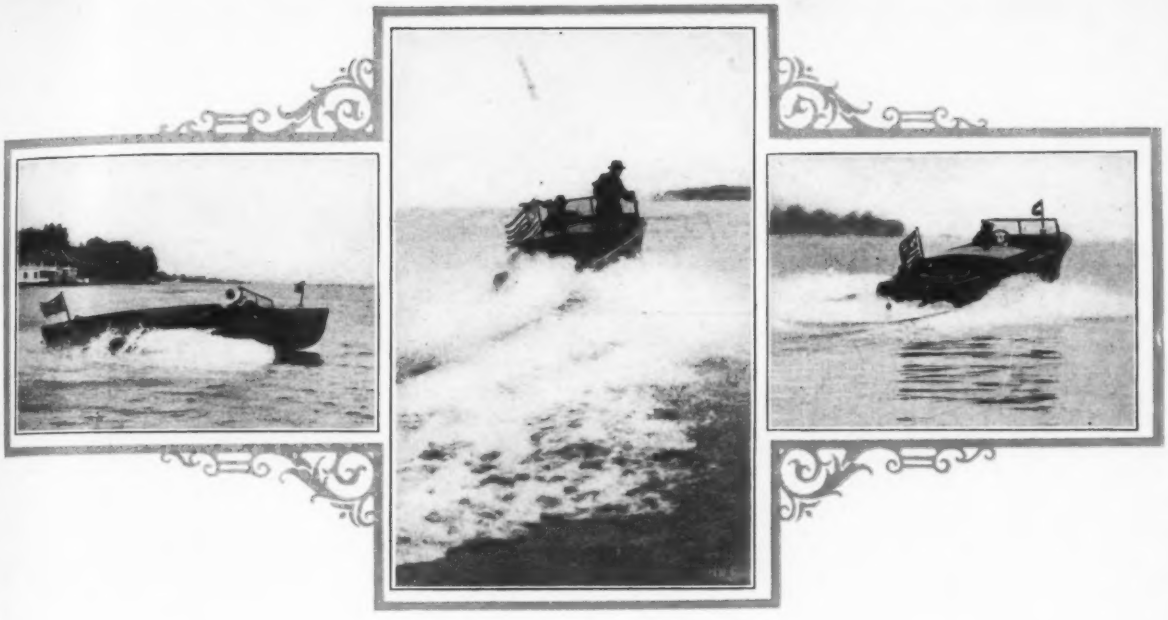


Important Features that are Exclusively Chris-Craft in Design and Construction

Important features of superiority in Chris-Craft design and construction:

1 Five-passenger forward cockpit with separate driver's seat and four-passenger after cockpit.

2 Convenient position of all operating devices.

3 Positive irreversible worm-driven steering mechanism, insuring absolute control.

4 Mahogany special screw-fastened battened seamed construction on sides and double-planked extra stout bottom.

5 One-piece reinforced full tilting windshield, affording absolute protection to passengers in heavy seas.

6 Four coats of Valspar varnish applied to mahogany decks and hull to insure rich weatherproof lustre.

7 Frames, full length fore and aft stringers, strut timber, stem, chine and bronze fastened knees made of finest selected white oak.

8 Powered with the new six-cylinder 150 horse power Kermath marine motor.

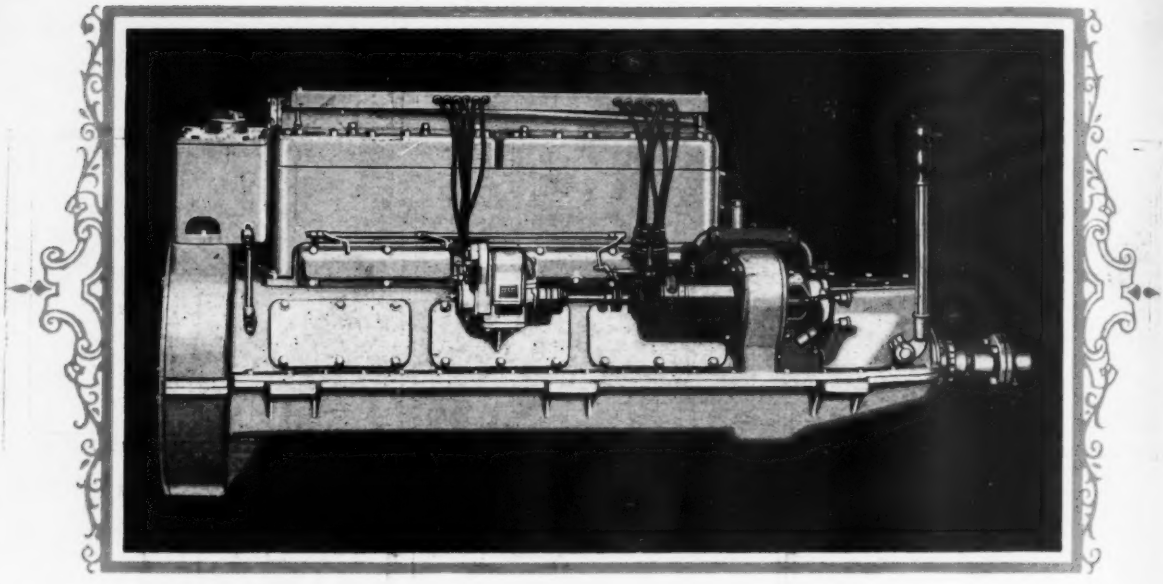
9 Guaranteed speeds of better than 35 miles per hour.

10 Salt water equipped throughout.

11 Price, $3500 F. O. B. Algonac, Michigan.

You have only to examine the Chris-Craft runabout to recognize in its many outstanding points of superiority, the reason for its enduring popularity. It combines—as no other runabout in its class does—beauty of design, comfortable seating arrangements, perfect handling qualities, mechanical reliability and absolute safety. In the new model Chris-Craft, completely salt water equipped with its specially designed six cylinder marine motor, the price that obtains gives a new meaning to runabout values.

Chris-Craft



POWER BY KERMATH

Mounted in the Chris-Craft hull, the magnificent new marine motor designed and built by Kermath will be used to furnish power for the 1926 model Chris-Craft. Without in any way cheapening the workmanship or material previously used in Chris-Craft construction, this much more expensive motor will be used as standard equipment at the former price figure for salt water equipment. This installation will afford power in such quantities that Chris-Craft will be the most talked about fast runabout in America.

Specifications

Horse Power—150 H. P.

Speed—1800 R. P. M.

Cylinders—Bore 5 inches, stroke 5½ inches. Displacement 648 cubic inches. Cast en bloc.

Crankshaft—Drop forged, 2½ inches diameter, with 7 main bearings, inherently balanced in design. No counterbalances necessary. Hollow bored 1 inch throughout with 7/32 inch holes bored through the cheeks so that thorough lubrication is provided.

Camshaft—Overhead drop forged, with cams integral. Extremely large, it is also provided with 7 main bearings.

Pistons—Lynite, split-skirt type, most accurately ground in, and fitted with oil return ring. Piston pin 1¼ inch diameter. Bearings are bronze.

Connecting Rods—Steel, machined all over for perfect balance.

Bearings—Bronze back, Chadwick process "Ring True" babbitt lined. Absolutely interchangeable without scraping or fitting.

Oiling System—Completely full pressure feed, dry sump type. Oil screening, cleaning and changing all done in oil tank mounted on flywheel housing.

Valves—Dual inlet and dual exhaust silicrom valves, extra large and with wide angle of seat.

Ignition—Double synchronized Delco battery ignition with double breaker bars and double condensers.

Flywheel—Grey iron, bolted to crankshaft flange.

Reverse Gear—Kermath 17-plate multiple disc model.

Stuffing Box—On rear bearing to prevent oil leakage.

Starting Motor—Delco 6 volt.

Storage Battery—Willard 6 volt, 150 ampere hour.

Crankcase—Oil pan and gear cover all of aluminum.

Weight—960 pounds.

CHRIS SMITH & SONS BOAT COMPANY
ALGONAC LARGEST BUILDERS OF FAST RUNABOUTS MICHIGAN

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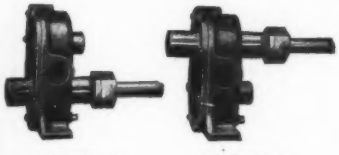
HAND BILGE PUMP

Oberdorfer Pumps

OBERDORFER
CIRCULATING PUMPS
FOR MARINE ENGINES

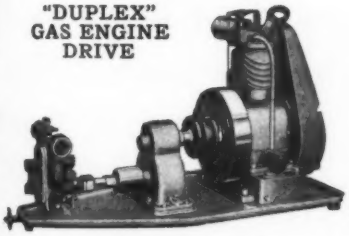
TYPE B, FORM YM



TYPE A FORM YM — TYPE A FORM XM

TYPE B, FORM XM

"DUPLEX"
GAS ENGINE
DRIVE



"FOR EVERY MARINE USE"

THERE is an Oberdorfer Pump for every Motor Boat requirement. Circulating pumps for cooling, and lubricating; bilge pumps, hand, gas engine and electric motor driven; fuel and water supply pumps—all manufactured with the same high grade bronze and excellent workmanship which have helped make Oberdorfer Pumps famous for more than forty years.

At the show and at leading aquatic centers look for the Oberdorfer nameplate on the pump. It is your guarantee of an efficient cooling system. Oberdorfer Pumps are standard equipment on many famous marine engines.

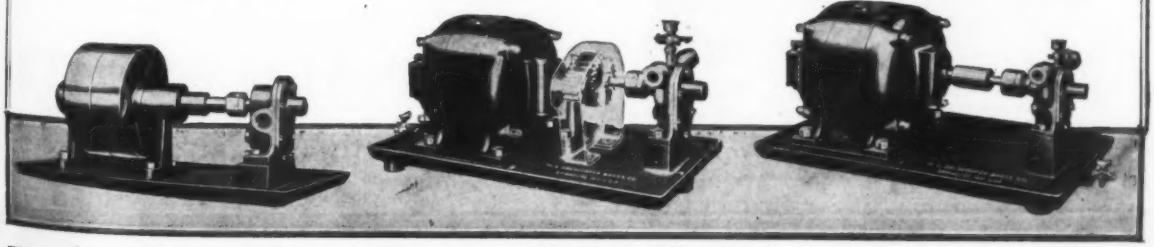
Write for Bulletin "D" and name of nearest dealer.

M. L. OBERDORFER BRASS CO.
SYRACUSE, NEW YORK

"TROJAN" BELT DRIVE

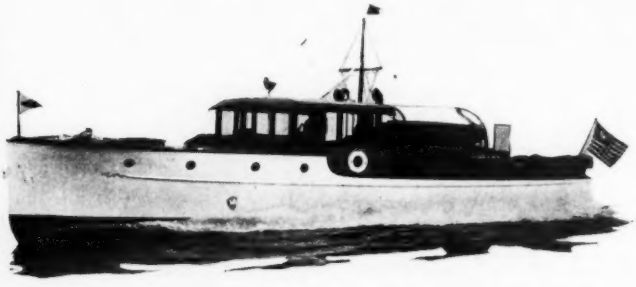
"LITTLE GIANT" GEAR DRIVE

"JUNIOR" DIRECT DRIVE



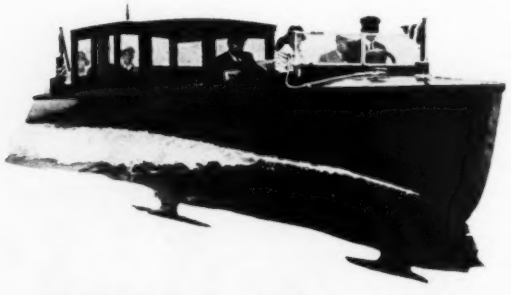
HALL-SCOTT

"Bobbie"—A Super Bear Cat owned by Norman B. Woolworth of New York City. Length 30'. Beam 7'. Designed and built by Belle Isle Boat & Engine Company of Detroit. Powered with an LM-6-cylinder Hall-Scott Marine Engine, 200 H.P. Speed 40 M.P.H.

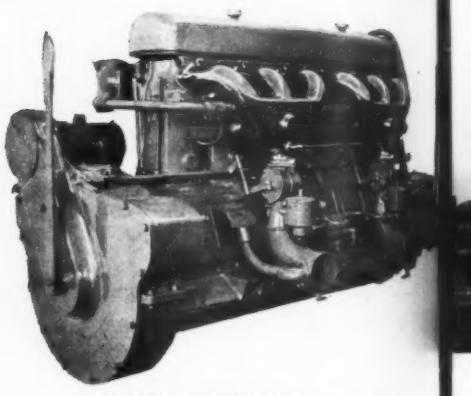


"Sazarac"—A standardized 54' Great Lakes Cruiser owned by George H. Townsend of New York and Greenwich, Conn. Designed and built by the Great Lakes Boat Building Corp., of Milwaukee, Wisc. Speed 23 M.P.H., with a pair of LM-6-cylinder, 200 H.P. Hall-Scott Marine Engines.

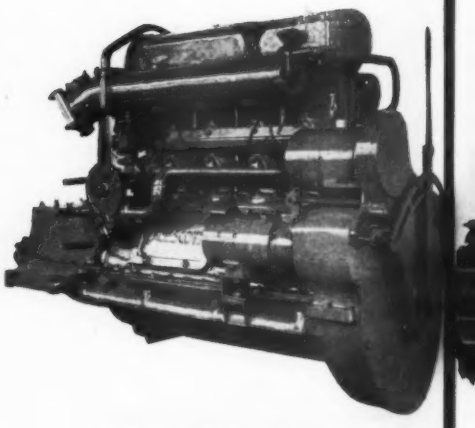
"Amico"—Owned by D. F. Alexson, Jr., of Los Angeles, the first of a new standardized 45 ft. cruiser. Beam—10' 6", draft 3' 6", weight 10 tons. Powered with an HSR-6-cylinder 90-100 H.P. Hall-Scott Marine Engine with a 3 to 1 reduction gear. Speed 14 M.P.H.



"My Own" A luxurious round bottom Sedan Runabout with forward cockpit. Owned by Hon. J. H. Himes of Washington D. C. Designed and built by Hutchinson's Boat Works. Length 36'. Beam 6' 8". Powered with a 125 H.P. Hall-Scott Marine Engine. Speed 26 M.P.H.



Hall-Scott LM-6 Marine Engine
Six cylinders. 200 H.P.



Hall-Scott LM-4 Marine Engine
Four cylinders. 125 H.P.

The Last Word in Power Plan
From 22 Runabouts to 10
Selected as Standard
Country's Leading Bo
See the Hall-Scott Marine Engine
January 22nd to 30t

HALL-SCOTT
461 Eighth Ave. at 33rd Street

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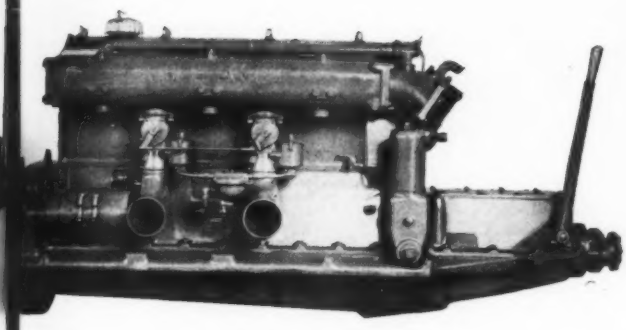
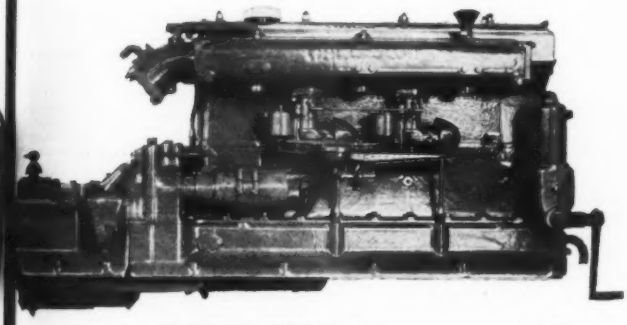
Super Marine Engines



Hall-Scott HSM Series
Four and Six cylinders. 50-70 H.P.—75-100 H.P.

The standardized twenty-eight foot Sea Sled Sedan, owned by Com. Harold S. Vanderbilt of the New York Yacht Club, powered with an LM-6-cylinder 200 H.P. Hall-Scott Marine Engine. Speed 38 miles per hour.

"Riv-it"—A handsome and fast twin screw cruiser, owned by Mr. Oscar L. Smith, Philadelphia, and Palm Beach. Length 40'. Beam 10'. Draft 3'. Designed by E. Lockwood Haggas and built by Chas. P. Lesh, Jr., & Sons, of Atlantic City. Powered with a pair of HSM, 75-100 H.P. Hall-Scott Marine Engines. Speed 20 miles per hour.



Hall-Scott HSR Series
Four and Six cylinders. 60-70 H.P.—90-100 H.P.
2 to 1 or 3 to 1 Reduction Gear.

The Matthews "38" Standardized Cruiser. Speed 20 miles per hour with an LM-6-cylinder 200 H.P. Hall-Scott Marine Engine or 15 miles per hour with the HSR reduction gear motor.

r All Types of Water Craft.
eavy Sea-going Cruisers.
quipment by the
uilders and Designers.
the New York Motor Boat Show,
pace F-1.

MOTOR CAR CO.
ew York City, N. Y.

America's Leading Marine Engine Builders

(*Continued from page* 105)

C. N. Cady Co., Inc.
Canastota, New York

CADYFORD

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
2.....	1½	3x2½	1	2	100	45	In fuel....	.....	.....	Own.....	.....	Schebler or Monarch
3.....	3	3⅜x3¾	1	2	700	90	In fuel....	.....	.....	Own.....	.....	Schebler or Monarch
6.....	6	3⅜x3¾	2	2	700	140	In fuel....	.....	.....	Own.....	.....	Schebler or Monarch
8.....	8	4⅛x4	2	2	700	140	In fuel....	.....	.....	Own.....	.....	Schebler or Monarch
4.....	4	4⅛x4	1	2	700	205	In fuel....	.....	.....	Own.....	.....	Schebler or Monarch
D.....	12-16	3 25/32x4	4	4	700	317	Splash....	Own..	Hand or electric..	Bosch.....	.....	Holley
O.....	12-16	3¾x4	4	4	700	300	Splash....	Own..	Hand or electric..	Atwater Kent or Bosch	.....	Holley
E.....	12-16	3¾x4	4	4	700	325	Splash....	Own..	Hand or electric..	Atwater Kent or Bosch	.....	Holley
OUMA.	20-25	3¾x4	4	4	1500	400	Splash....	Own..	Hand or electric..	Atwater Kent or Bosch	.....	Zenith or Schebler
OMZC..	30	3¾x4	4	4	2000	350	Splash....	Own..	Hand or electric..	Atwater Kent or Bosch	.....	Zenith or Schebler

Caille Perfection Motor Co.
6210 Second Boulevard, Detroit, Mich.

CAILLE

Horse Power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Carburetor
2½.....	3¼x3½	1	2	800	125	In fuel.....	Schebler
4.....	3⅞x3½	1	2	800	150	In fuel.....	Schebler
6.....	4⅛x4½	1	2	800	200	In fuel.....	Schebler
6.....	4¼x4½	1	2	800	250	In fuel.....	Schebler
8.....	3⅞x3½	2	2	800	280	In fuel.....	Schebler
8.....	5¼x5	1	2	500	335	In fuel.....	Schebler
8.....	3⅞x3½	2	2	850	220	In fuel.....	Schebler
14.....	4¾x4½	2	2	750	350	In fuel.....	Schebler

Carlyle-Johnson Machine Co.
Manchester, Conn.

BUD-E

Model	Horse power	Bore and Stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Carburetor
Bud E.....	5	3x3	2	2	1200	120	In fuel.....	Carlyle-Johnson	Hand.....	Magneto.....	Schebler

Consolidated Shipbuilding Corpn.
Morris Heights, New York, N. Y.

SPEEDWAY

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
Z	44*	4½x5½	4	4	1200	950	Splash.....	Speedway.....	Bijur.....	Bosch.....	Rajah.....	Kingston
M-4	75	5¼x7	4	4	1000	1850	Pressure.....	Speedway.....	Bijur.....	Bosch & Delco....	Rajah.....	Stromberg
M-6	150	5¼x7	6	4	1200	1900	Pressure.....	Speedway.....	Bijur.....	Bosch & Delco....	Rajah.....	Stromberg
M-8	200	5¼x7	8	4	1200	2350	Pressure.....	Speedway.....	Bijur.....	Bosch & Delco....	Rajah.....	Stromberg
MR-6	180	5¼x7	6	4	1300	2200	Pressure.....	Speedway.....	Bijur.....	Bosch & Delco....	Rajah.....	Stromberg
P	115	6¼x8½	6	4	600	4800	Pressure.....	Speedway.....	Bijur.....	Bosch & Delco....	Rajah.....	Stromberg
R	300	7 x8½	6	4	1200	4000	Pressure.....	Speedway.....	Bijur.....	Bosch & Delco....	Rajah.....	Stromberg
H	250	11 x12	6	4	450	11,400	Pressure.....	Reversible....	Air.....	Bosch.....	Rajah.....	Stromberg

James Cunningham, Son and Co.
Rochester, N. Y.

CUNNINGHAM

Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plug	Carburetor
100	3¼x5	8	4	2100	1150	Pressure.....	Joes.....	Delco.....	Delco.....	Champion.....	Stromberg

Detroit Marine Aero Engine Co.
409 Connecticut Avenue, Detroit, Michigan

DETROIT-MARINE

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
F-6.....	300	6.3x7.09	6	4	1650	....	Press.....	Joes.....	Gar Wood.....	Delco.....	Champion.....	Zenith
D-M 4...	125	5x7	4	4	1800	900	Press.....	Cross.....	De Jon.....	Delco.....	Champion.....	Zenith
D-M 6...	200	5x7	6	4	1800	1100	Press.....	Cross.....	De Jon.....	Delco.....	Champion.....	Zenith

Erd Motors Corporation
Saginaw, Mich.

ERD

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
S-4.....	20-42½	3¼x5	4	4	1000-2100	625	Force feed....	Paragon....	Auto-Lite....	Atwater-Kent or Robt Bosch magneto.....	Champion....	Stromberg

Elco Works
Bayonne, New Jersey

ELCO

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
F4	50	4¼x6	4	4	1600	1300	Pressure.....	Own.....	Electric.....	Delco &	.....	Stromberg
F6	94	4¼x6	6	4	1600	1800	Pressure.....	Own.....	Electric.....	Splitdorf.....	.....	Stromberg

Evinrude Motor Company
Milwaukee, Wis.

EVINRUDE

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	Port	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
CC Inboard.....	2	2⅝x2½	1	2	2	900	45	In fuel.....	.....	Own.....	Magneto....	Champion.....	Evinrude
DD Inboard.....	5	2⅝x2½	2	2	3	1500	70	In fuel.....	.....	Own.....	Magneto....	Champion.....	Evinrude
DDR Inboard...	5	2⅝x2½	2	2	3	1500	85	In fuel.....	Carlyle.....	Own.....	Magneto....	Champion.....	Evinrude

The Frisbie Motor Company
7 College Street, Middletown, Conn.

FRISBIE VALVE-IN-HEAD

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
S	20	4x5	4	4	750	850	Pressure	Paragon.....	Bosch.....	Bosch.....	A. C.....	Schebler
FA	7	4¼x5	1	4	750	400	Gravity	Paragon.....	Leece-Neville.....	A. K. & Bosch....	A. C.....	Schebler
FC	10	6x6	1	4	700	560	Gravity	Paragon.....	Leece-Neville.....	A. K. & Bosch....	A. C.....	Schebler
FB	14	4¼x5	2	4	700	525	Force feed...	Paragon.....	Leece-Neville.....	A. K. & Bosch....	A. C.....	Schebler
FE	40	4¼x5	4	4	1200	925	Force feed...	Paragon.....	Leece-Neville.....	A. K. & Bosch....	A. C.....	Schebler
FF	60	6x6	4	4	900	1400	Force feed...	Paragon.....	Leece-Neville.....	A. K. & Bosch....	A. C.....	Schebler
TM-2	28	6x6	2	4	750	1375	Pressure	Paragon.....	Leece-Neville.....	A. K. & Bosch....	A. C.....	Schebler
TM-4	75	6x6	4	4	900	2150	Pressure	Paragon.....	Leece-Neville.....	A. K. & Bosch....	A. C.....	Schebler
TM-6	115	6x6	6	4	900	2750	Pressure	Paragon.....	Leece-Neville.....	A. K. & Bosch....	A. C.....	Schebler

(*Continued on page* 194)

JULIAN S. BROWN, PRESIDENT
W. CHARLES LIPE, 1ST VICE PRES.
HERBERT E. PAGE, 2ND VICE PRES.
H. FOLLETT HODGKINS, SECT. & TREAS.

JULE MOTOR CORP.
Syracuse N Y

Mr. Edward Smith,
Palm Beach, Fla.

Dear Ed:

Remember when you were a youngster and had your first ride in a boat.

Remember how they used crank and crank and crank and then maybe she would and maybe she wouldn't.

Remember when you used to play hookey from school and take your father's boat for a ride unbeknown to him.

Remember how you dreamed that someday somehow you were going to have a boat of your own.

Can you ever get back the thrill of those bygone days? You can buy a motor boat equipped with a Jule Motor. It makes motor boating more pleasant.

We haven't sufficient space in this letter to go into any of the details of this motor as we would like to, so if you will kindly drop us a card or a letter, we will be very glad to forward our descriptive matter to you.

Hoping to hear from you shortly, beg to remain

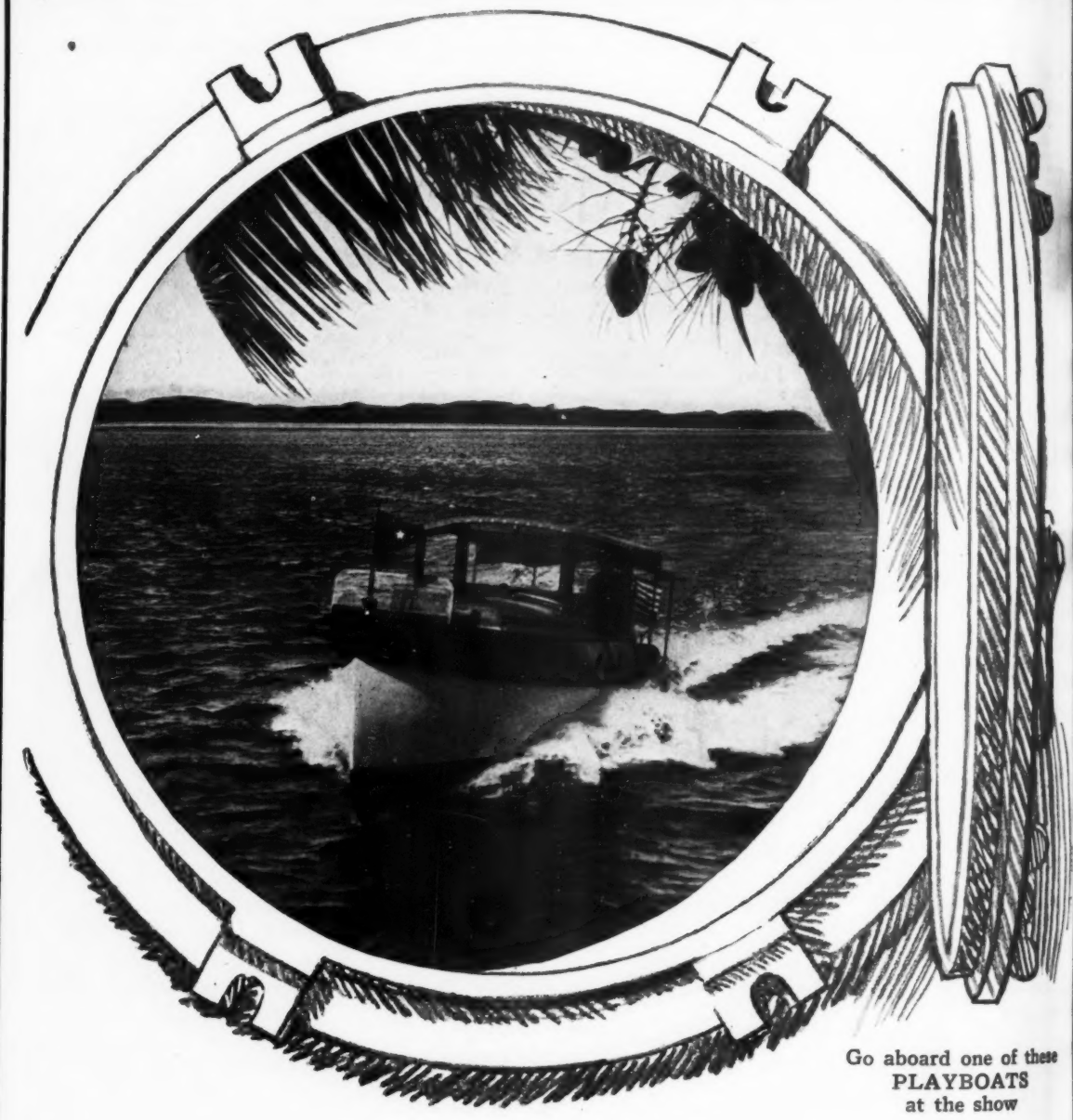
Very truly yours,

JULE MOTOR CORP.

Julian S Brown

The eight and four cylinder motors develop 100 and 50 H.P. respectively at 2000 R.P.M., have a piston displacement of 426 - 213 cubic inches, actual weight 846 - 590 pounds, list at $1200.00 and $700.00 complete including salt water equipment.

Either motor can be equipped with our 2:1 or 3:1 reduction gear at an additional cost of $100.00.

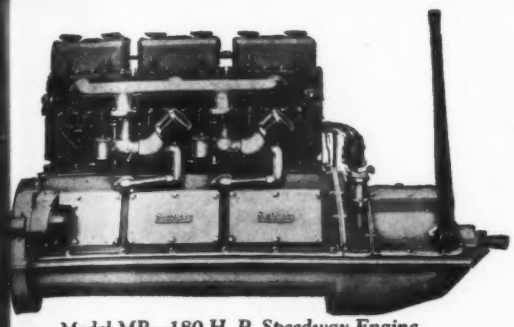


Go aboard one of these
PLAYBOATS
at the show

The Consolidated Exhibit at the New York Motor Boat Show

OUR EXHIBIT this year will include the famous Consolidated Playboat (shown above and at the foot of facing page); the Consolidated Coupe and Open Yacht Tenders; and Speedway Engines (models ranging from 22 to 300 H. P.). We will also have

Advertising Index will be found on page 284



Model MR—180 H. P. Speedway Engine

n display, at Booth No. 40 on
he mezzanine floor, our Speed-
vay Electric Flusher.

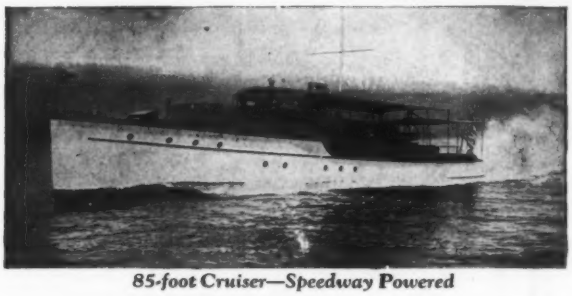
WE ARE, today, the world's largest builders of fine pleasure boats and heir propelling machinery. More than ,000 yachts of all sizes, kinds and char-cter, have been built for the leading achtsmen of the country by us during he past forty years. The facilities of our ards and the output today are greater han ever.

We shall be glad to welcome you to our Exhibit at the Show, Blocks A-2 and A-3, Grand Central Palace, Jan. 22nd to 30th, 1926.

CONSOLIDATED SHIPBUILDING CORP.
ORRISHEIGHTS NEW YORK CITY

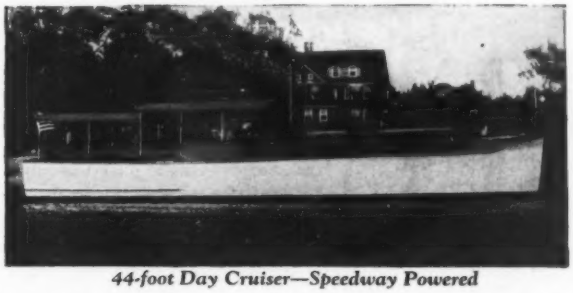
Designers and Builders of Runabouts Playboats

Day Cruisers
North and South Cruisers
Motor and Steam Yachts
Speedway Gasoline Engines



85-foot Cruiser—Speedway Powered

92-foot Cruiser—Speedway Powered



44-foot Day Cruiser—Speedway Powered

65-foot Cruiser—Speedway Powered

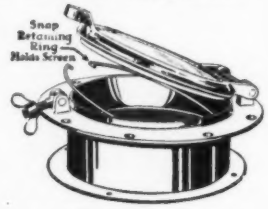
The famous Consolidated Play Boat—Speedway Powered

TRADE MARK

WILCOX

Inside Pattern Port Lights

with mosquito screen held by a snap retaining ring



A new feature in one of the 1001 dependable Wilcox fittings is the mosquito screen of fine mesh brass wire held in position by a snap retaining ring. The screen can be removed instantly by a slight pressure of the fingers. Yachtsmen will welcome this improvement on the Wilcox Inside Pattern Port Light. It is furnished at slight extra cost.

At Your Dealers

Nearly all the best dealers carry Wilcox dependable Marine Hardware. If your dealer doesn't, write us direct and we will tell you where to get it.

Boat Owners, Here is the Book You Need!

"Sea Craft Suggestions and Supplies" solves those daily "puzzlers" that few know how to handle. Tells how to Box the Compass; what is Proper Ground Tackle; gives hints on Steering Gear, etc.; describes WC Dependable Marine Hardware; tells uses. Compiled from 78 years' experience in making marine fittings. 50c prepaid.

WILCOX, CRITTENDEN & CO., Inc.

4 South Main Street **Middletown, Conn.**

SINCE 1847, MAKERS OF

Dependable Marine Hardware

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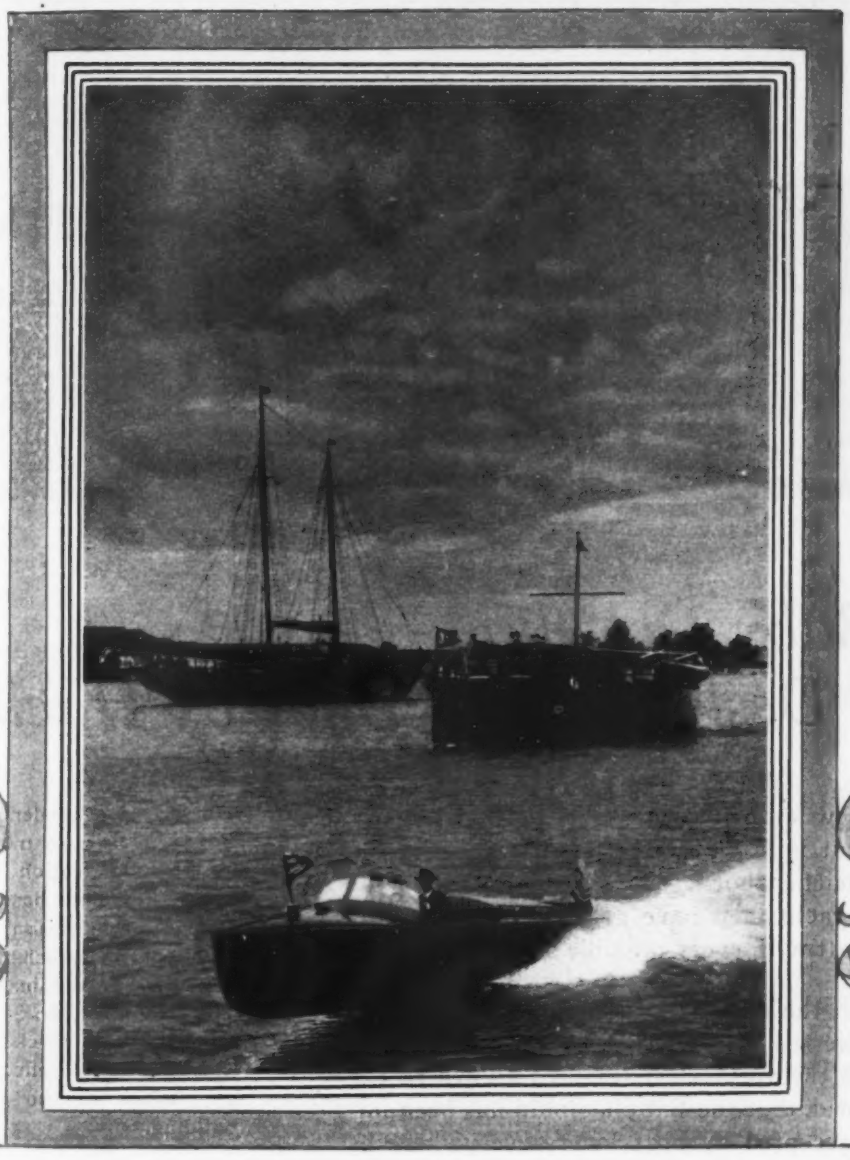
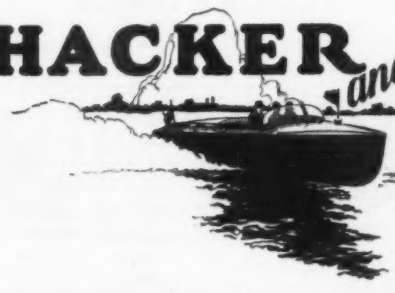


HACKER-CRAFT

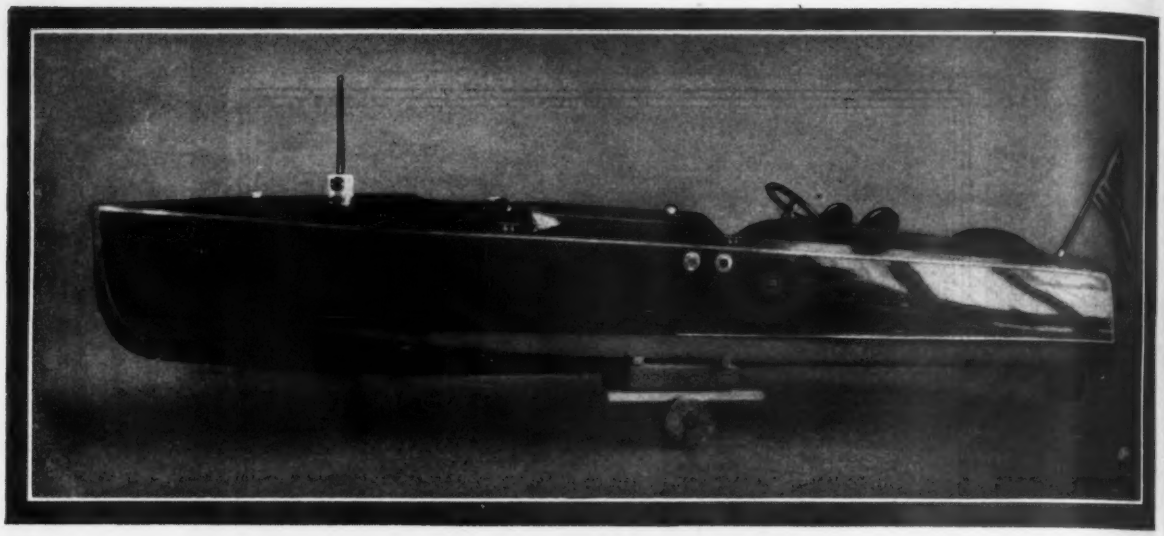


HACKER and FERMANN

INCORPORATED

DISTRIBUTORS

Sixty-three hundred E. Jefferson
DETROIT



The Baby Dolphin— Designed and Built by Hacker

THIS new model twenty-two foot mahogany runabout is in answer to popular demand for a light, efficient, thoroughly seaworthy runabout. Sportsmen-yachtsmen have greeted this beautiful sporting craft with every possible sign of approval.

Mr. Hacker, the designer, has happily included so many niceties of construction and equipment, together with the very latest features known to the boating world, that the Baby Dolphin has been immediately accepted by boat lovers everywhere as setting a new standard for its size.

The growing tendency of many people to turn to motor boating for their recreation and out-of-doors enjoyment has enabled the Hacker organization to produce runabouts in sufficient volume to offer the best obtainable in value. The Baby Dolphin is another triumph of the Hacker Company that creditably reflects the skill of masters in the art of boat building.

SPECIFICATIONS

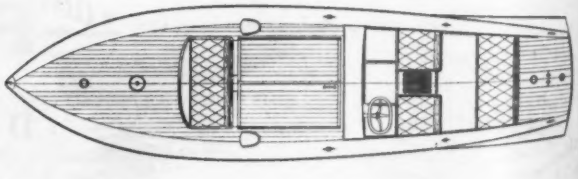
Length	21 feet 10 inches
Draft	18 inches
Planking	Mahogany natural finish
Construction	Double planked bottom, single planked sides
Fastenings	Salt water fastened and equipped
Seating Capacity	Seven Passengers

POWER EQUIPMENT

Scripps F-4 and F-6 Speeds 25-35 miles per hour

SALT WATER EQUIPPED THROUGHOUT

"Spend Your Play Hours on the Water in a Dolphin"



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Not Special Boats But Boats Built by Specialists

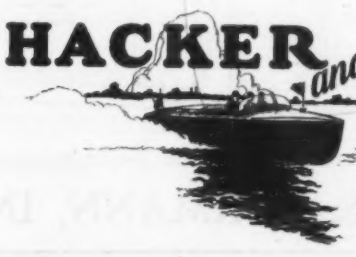
Within the Hacker organization can be found men of attainment in the realm of boat building. Mr. Hacker has gathered about him men of merit whose outstanding abilities in boat design and construction enable them to meet the highly specialized requirements of today.

M. James Hager
Suite 1216
393 Seventh Avenue
New York City
Eastern Representative

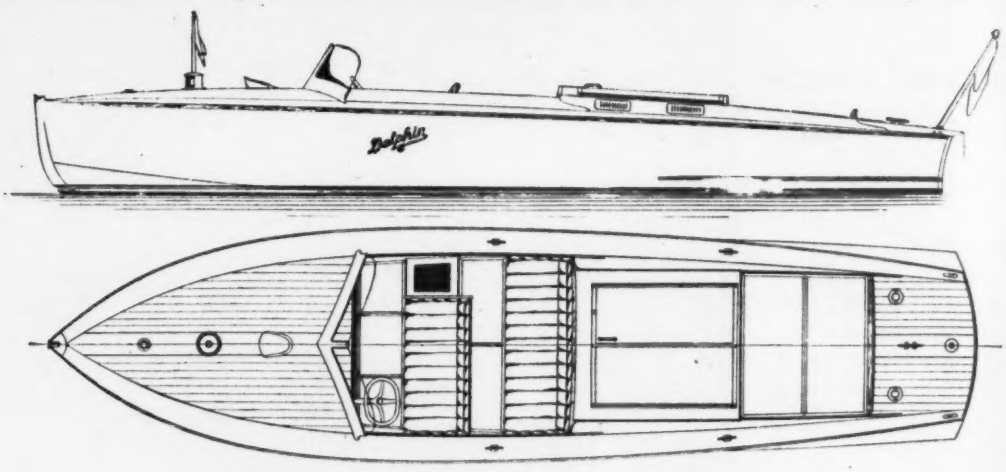
The HACKER "Dolphin" RUNABOUT for 1926

THE 1926 model of the twenty-six foot Hacker Dolphin marks a new era in runabout design. Its dry riding qualities, its ease of handling, its grace and fleetness, together with its unquestioned roominess and comfortable accommodation mark it for the complete beautifully finished craft it is. Nowhere else can the boating enthusiast who has learned what to expect in runabout values find a boat that better answers the desire for speed, sturdiness and splendid appearance. You may have your choice of two six cylinder marine motors designed to give both speed and reliability in fresh or salt water. A fully guaranteed speed of more than 30 miles per hour goes with every Dolphin runabout.

To go even further into the Hacker organization would reveal many untold features of runabout construction which are only apparent in the finished product to a craftsman equally skilled in the art of boat building. In producing Dolphin runabouts no short cuts or concealed economies are practiced to cheapen these boats. Only the very finest materials such as the best grade of Honduras mahogany for planking or the use of extra stout bronze castings go into the hull. Mr. Hacker with marked thoroughness sees to it that each boat is built alike to a standard of perfection which he himself has created for the Dolphin Runabout.



HACKER and FERMANN
INCORPORATED
DISTRIBUTORS
Sixty-three hundred E. Jefferson
DETROIT



Designers of Racing Craft and Special Runabouts

SPECIFICATIONS
For the 26-foot Dolphin

Length	25 feet 10 inches
Beam	6 feet 6 inches
Draft	23 inches
Planking	All mahogany
Construction	Double planked bottom, single planked sides
Fastenings	Brass screws and copper rivets
Seating Capacity	7 in forward cockpit, 3 in after cockpit

Salt Water Equipment Throughout

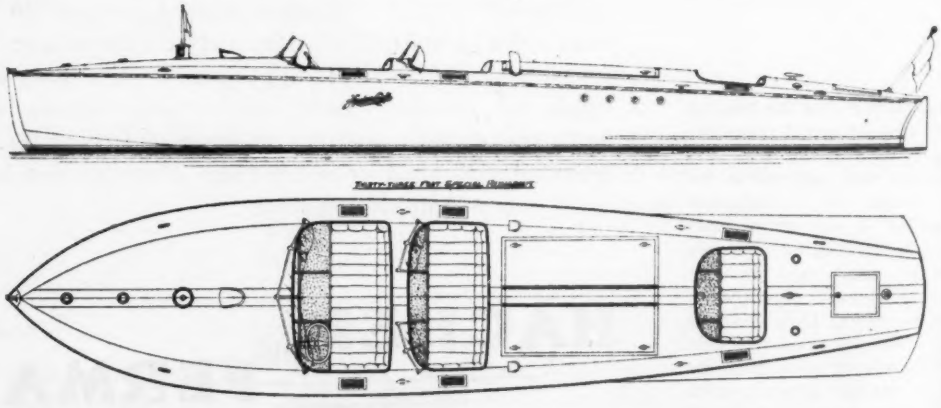
Power Equipment and Speed.

Motors ranging from 90 horse power to 200 horse power may be installed at option of customer. The speed will range from thirty to forty-two miles per hour depending on motor selected.

WE are prepared to execute orders for special built racing boats for any class or event. Our service includes the designing, building and testing out of Junior Gold Cup or Gold Cup models of race boats. To meet requirements for special built runabouts we also offer plans and can build in our well equipped race boat plant 30 or 33 foot runabouts with speeds ranging from 38 to 55 miles per hour depending on the power installation used.

We solicit enquiries on specially designed runabouts, cruisers, cruiser houseboats and racing craft.

Special 33 foot Mahogany Runabouts



Seating arrangements may be changed in these special mahogany runabouts to suit the owner.

HACKER & FERMANN, INC., DETROIT

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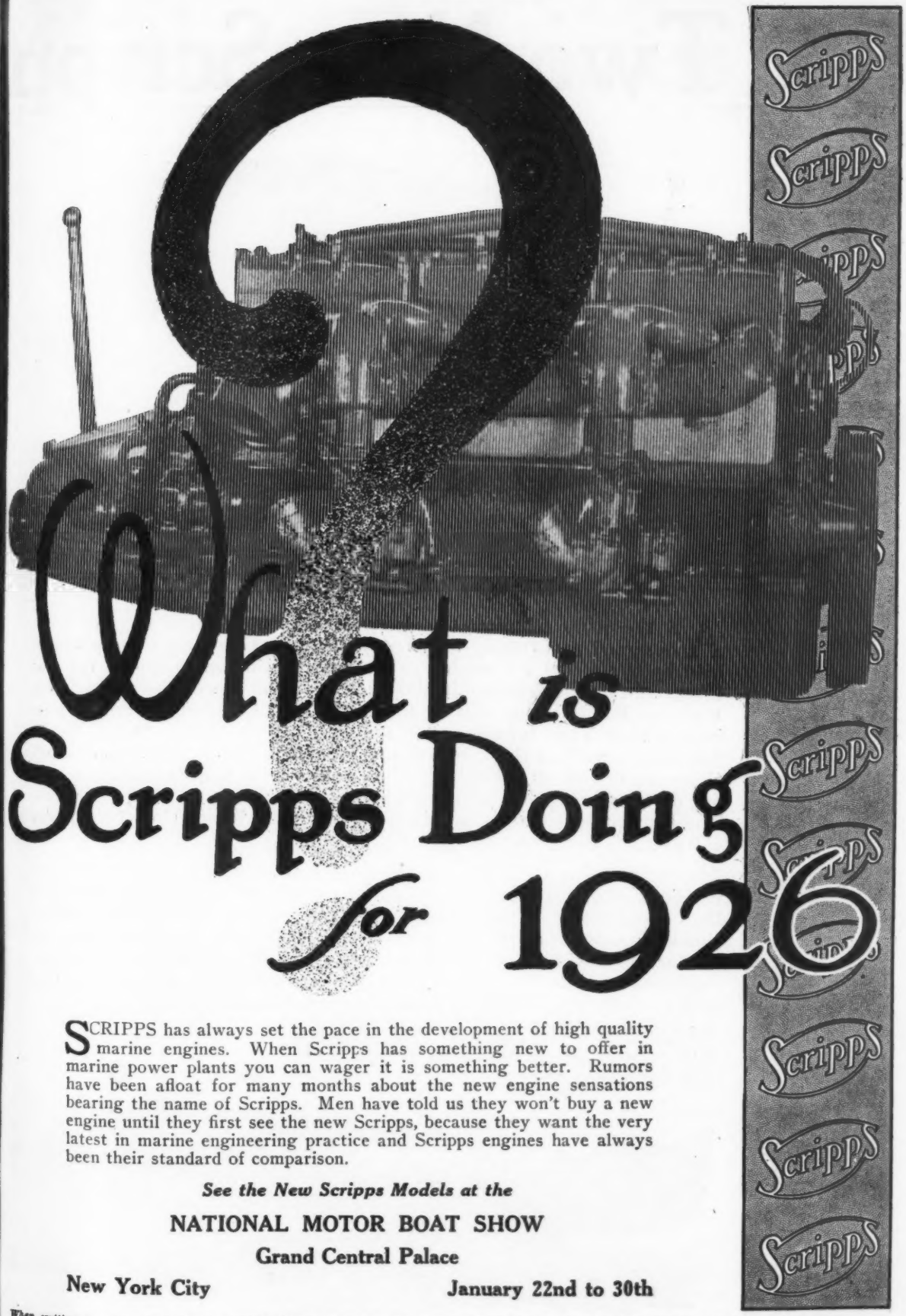


What is Scripps Doing for 1926

SCRIPPS has always set the pace in the development of high quality marine engines. When Scripps has something new to offer in marine power plants you can wager it is something better. Rumors have been afloat for many months about the new engine sensations bearing the name of Scripps. Men have told us they won't buy a new engine until they first see the new Scripps, because they want the very latest in marine engineering practice and Scripps engines have always been their standard of comparison.

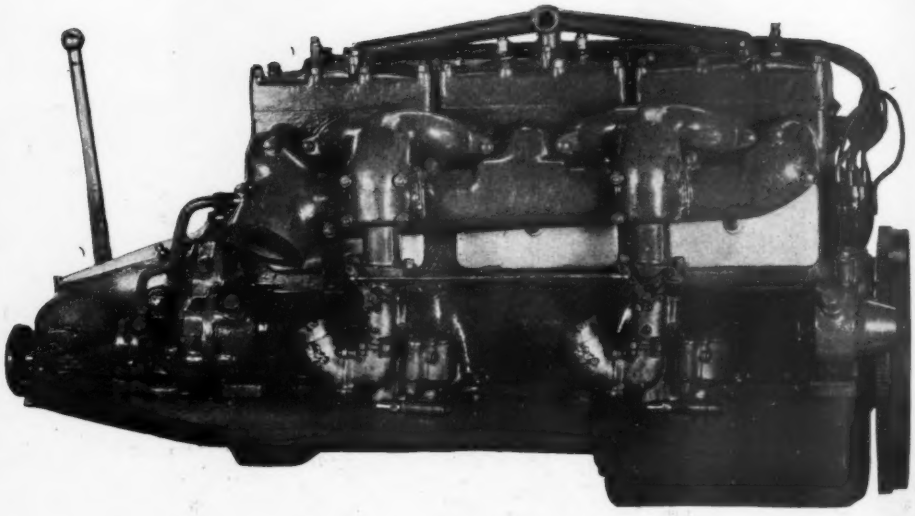
See the New Scripps Models at the

NATIONAL MOTOR BOAT SHOW

Grand Central Palace

New York City **January 22nd to 30th**

Two New Scripps



The Junior Gold Cup Scripps

AS the name implies, the Junior Gold Cup Scripps engines were designed particularly to defend the Junior Gold Cup Championship held by the model F-6 engine as well as the Championship in the 340 Class, won by the same engine last year. It will power the twenty new Biscayne Babies being built by the Purdy Boat Company of Port Washington, New York, for this year's one design race at the Miami Beach Regatta as well as the fifteen Tampa Baybies which the Hacker Boat Company of Detroit is building along Junior Gold Cup specifications for one design class racing, sponsored by Mr. D. P. Davis of Tampa, Florida. The Hacker Boat Company is likewise using the Junior Gold Cup model F-6 as stock equipment for the 1926 Dolphin.

In general, the motor is a standard F-6 Scripps with special modifications designed to greatly increase the power output of this splendid engine in high speed work. It has specially designed racing heads, dual carburetion and many other refinements. Being built on a quantity basis, the production schedule of this motor has reached a point where prompt deliveries are already under way for 1926 requirements. The price of this special machine is slightly advanced over the regular model.

This is a stock model Biscayne Baby built by the Purdy Boat Co. of Port Washington, N. Y. It is a duplicate of the famous racing boats of the same name. The Scripps F-6 is standard power equipment. Twenty of these boats have been ordered for this year's one design class race at Miami Beach and will be powered with the new Junior Gold Cup Scripps. These boats have a speed of better than 40 miles per hour.

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Marine Engines

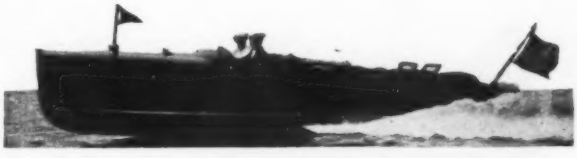
The G-6—150 H. P.

DID you ever hear the word "Humdinger"?

Well, that does not begin to describe this new wonder engine, the Scripps G-6. It's a bigger and better Scripps of greater vigor and pep. Six cylinders and power galore. Flexible? Nothing like it. The wide range of speeds, the swift response to the throttle and pickup are astounding.

Engineers who have been privileged to see the G-6 in operation and study its design have been most enthusiastic in their praise. It has been remarked that the G-6 will stir up more admiration than the famous F-6 did for the past year and a half if such a thing is possible. This motor is the Scripps contribution to 1926 engineering that will mean much in the industry. It will also prove the big surprise of the Show, having been kept pretty well under cover, not even a photograph has been released.

First showing and price announcement will be at the National Motor Boat Show, Grand Central Palace, New York, January 22nd to 30th. Its nominal rating of 150 H.P. does not begin to tell the whole story. Look for future announcements or make inquiries about this engine.



The Hacker Dolphin, a standardized 26 ft. Runabout, built by the Hacker Boat Co., of Detroit, is powered with the Scripps F-6 and develops a speed of 31 miles per hour.

The Dart, a standardized 26 ft. Runabout, built by the Indian Lake Boat Co. of Lima, Ohio. The Scripps F-6 is used as standard equipment on this handsome runabout.

The Dunphy Boat Co. of Eau Claire, Wis., is now using the Scripps F-6 in their 26 ft. standardized runabout which is shown here. The speed is better than 30 miles per hour.

Scripps
Scripps
Scripps
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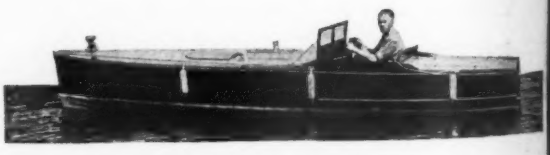
Scripps
Scripps
Scripps

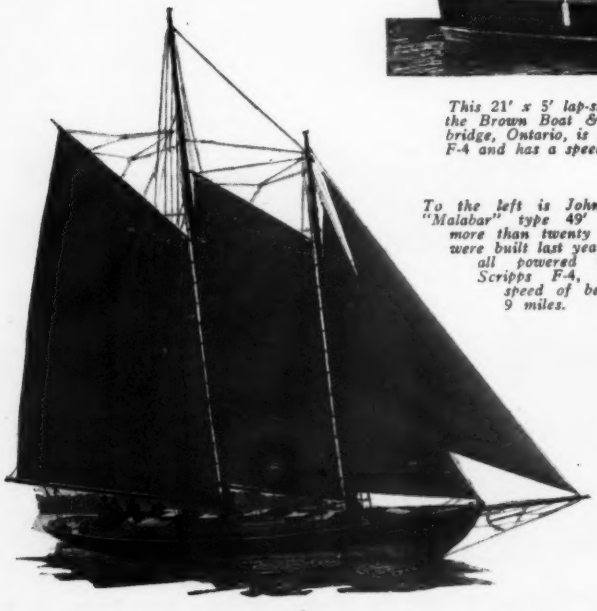
SCRIPPS F-4

F-4 15-40 H.P., Medium Duty 40-60 H.P., High Speed Including Electric Starter **$750.**

FOR a light, fast runabout, small cruiser or auxiliary schooner up to 40 feet in length the Scripps F-4 makes a very efficient power plant. It is made in both high speed, 40-60 H.P., and medium duty, 15-40 H.P., types. Compact in size it gives real economy in space. Throughout its wide speed range of 500 to 2600 R.P.M., there is no period of perceptible vibration.



This 21' x 5' lap-strake runabout, built by the Brown Boat & Motor Works, Bracebridge, Ontario, is powered with a Scripps F-4 and has a speed of 27 miles per hour.



To the left is John Alden's "Malabar" type 49' schooner, more than twenty of which were built last year and are all powered with the Scripps F-4, giving a speed of better than 9 miles.

S. S. Crocker, Jr., of Boston, designed this 41' 6" auxiliary Marconi schooner for a Detroit yachtsman. It is powered with a Scripps F-4 and was built by Harvey F. Gamage of South Bristol, Maine.

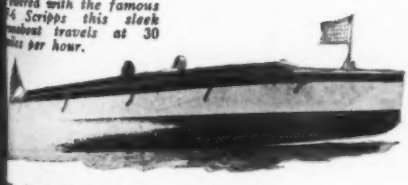
Advertising Index will be found on page 384

Here's the Most Talked of Six Built—*The Scripps F-6*

F-6 100 H.P., High Speed 50 H.P., Medium Duty Including Electric Starter **$1250.**

IT would take a pretty large volume to record all the victories of Scripps engines and more than half would be occupied by the triumphs of the F-6 since its introduction in 1924. The power of this engine is considerably more than the rated 100 H.P. The superior design and higher quality of the F-6 produces more power than any other six cylinder engine having the same bore, stroke and piston displacement. This is the engine that powered all of the boats in the Biscayne Baby one design class as well as holds the Junior Gold Cup Championship and the Championship in the M.V.P.B.A. 340" class Championship. It is used as stock equipment for more high class runabouts than any other engine made.

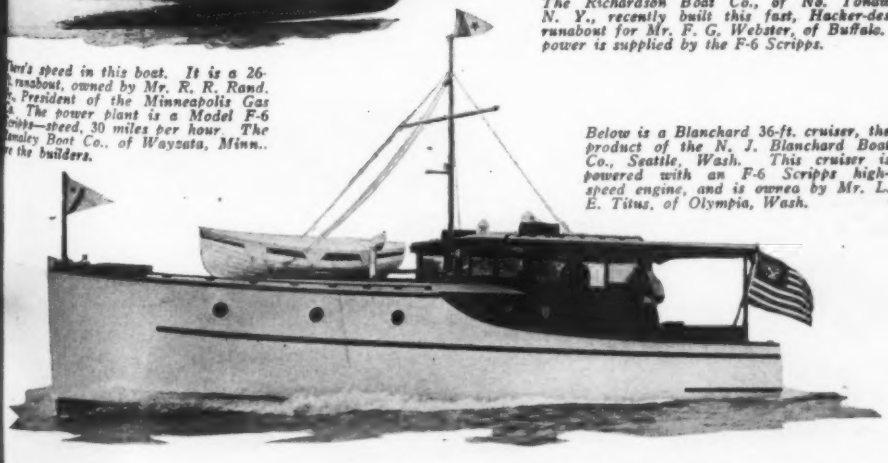
Surf Rider, a 26' runabout built by the Great Lakes Boat Building Corp., of Milwaukee, Wis., for Miss Dorothy Burne, of Chicago. Powered with the famous F-6 Scripps this sleek runabout travels at 30 miles per hour.

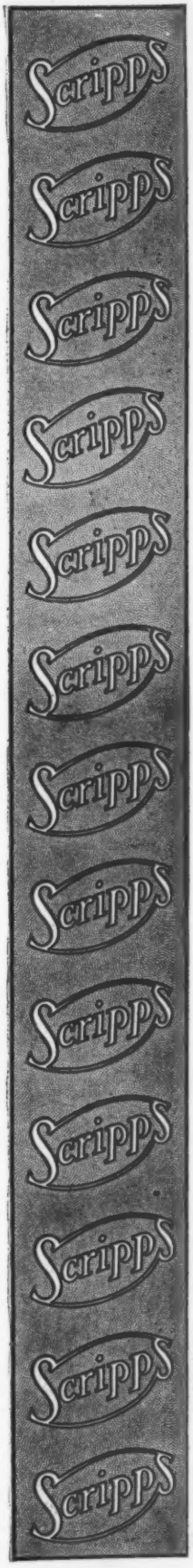


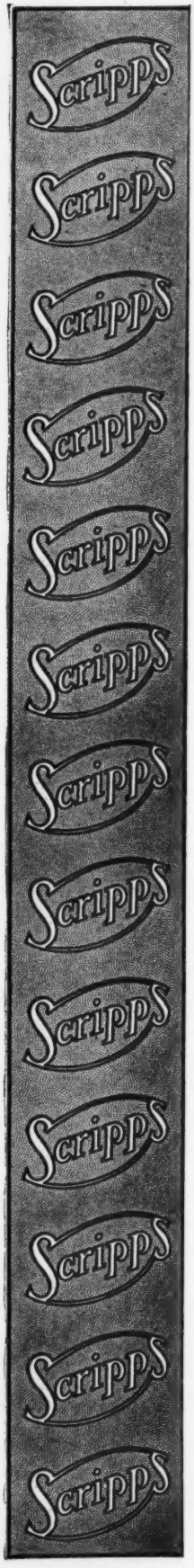
The Richardson Boat Co., of No. Tonawanda, N. Y., recently built this fast, Hacker-designed runabout for Mr. F. G. Webster, of Buffalo. The power is supplied by the F-6 Scripps.

There's speed in this boat. It is a 26-ft. runabout, owned by Mr. R. R. Rand, Jr., President of the Minneapolis Gas Co. The power plant is a Model F-6 Scripps—steed, 30 miles per hour. The Hanaley Boat Co., of Wayzata, Minn., are the builders.

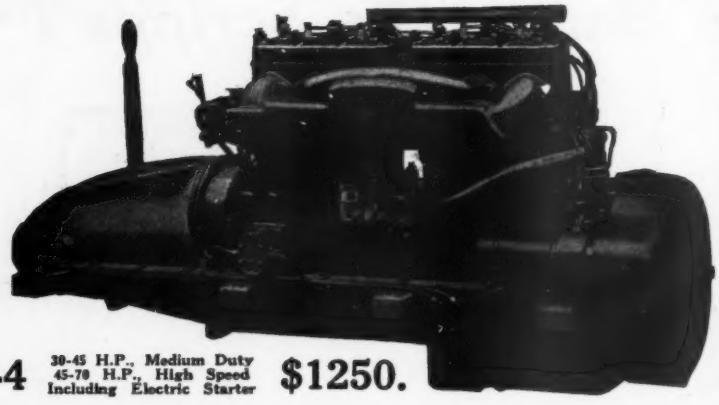
Below is a Blanchard 36-ft. cruiser, the product of the N. J. Blanchard Boat Co., Seattle, Wash. This cruiser is powered with an F-6 Scripps high-speed engine, and is owned by Mr. L. E. Titus, of Olympia, Wash.







Scripps "E" Series



E-4 30-45 H.P., Medium Duty 45-70 H.P., High Speed Including Electric Starter **$1250.**

BOAT builders recognize that it is a selling asset to power boats with motors of superior design and quality. Motors of inferior design are the biggest drawback on the sale of any boat no matter how fine a craft it may be. That is why most boat builders recommend and use Scripps engines. That is why the purchaser of a boat asks if it is Scripps powered. The endurance and power of the E-Series in four and six cylinder made the Scripps the leading winner in ocean racing for two years past.

The Scripps E-Series finds unusual favor with stock boat builders. The E-4 is extremely popular. More of these engines have been sold than any other power plant over 30 H.P. It is an all enclosed motor, very accessible and finely built.

This is the famous Matthews "38" cruiser built by the Matthews Company of Port Clinton, Ohio. Two of these boats powered with Model E-4 Scripps engines were delivered to Florida this season for prominent yachtsmen.

This all mahogany runabout, owned by Mr. H. C. Granneman, steps along at a lively pace. It is designed by John L. Hacker. The principal dimensions are 28' x 6' x 8'. On a trial trip with the throttle of its Model E-6 Scripps high-speed engine only one-half open the speed was 30 miles per hour. The maximum speed is about 35 miles.

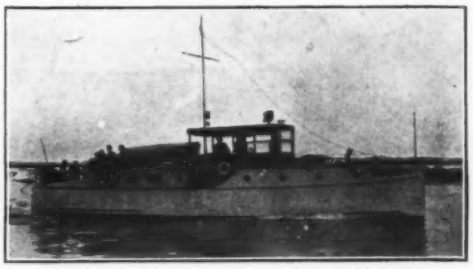
Advertising Index will be found on page 284

Fours and Sixes

E-6 40-60 H.P., Medium Duty 60-100 H.P., High Speed Including Electric Starter **$1750.**

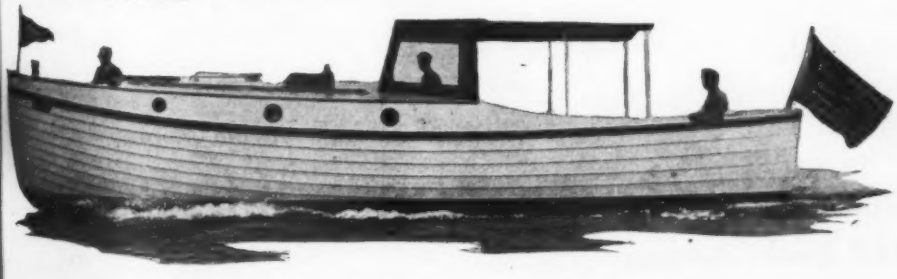
THE E-6 is an all enclosed smooth running motor with power unmatched by any six cylinder engine in its class. It is the ideal power plant for large cruisers up to 60 feet and for twin screw yachts up to 75 feet. The long roster of E-6 powered boats demonstrates beyond question the dependability of the "built-in-service" which is so abundant in every engine produced by Scripps.

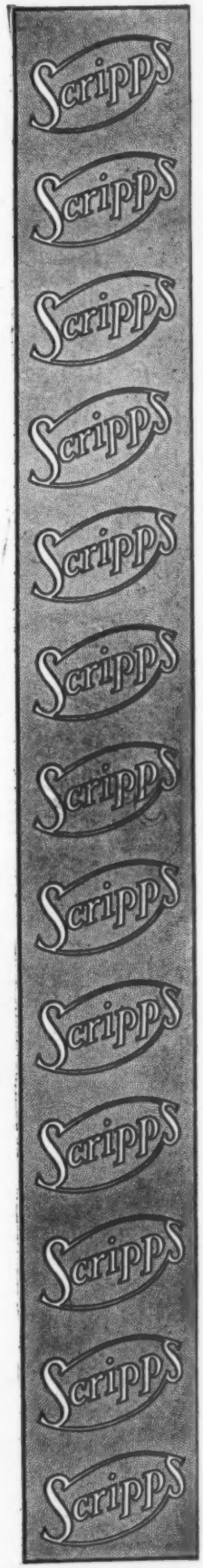
Merry Ripple, a 52' x 12', twin-screw yacht, owned by Mr. R. S. Ripple, of Chicago, Ill. This boat was built by the Burger Boat Co. at Manitowoc, Wis., and is powered with a pair of E-6 Scripps marine engines. Speed, 14½ miles per hour.



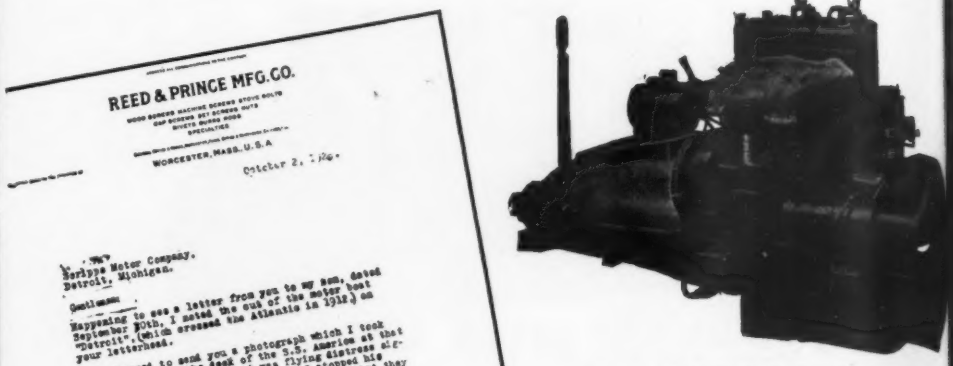
Here's another famous Scripps powered boat—Nepenthe II—in which Van Campen Heilner, of Philadelphia, author of "Beneath the Southern Cross," made a 4,000-mile cruise through the West Indies and the Caribbean to the coast of South America. A 47-footer, designed by Murray Watts, and powered with two E-6 Scripps engines.

La Flamme, a 34-ft. Sea Skiff cruiser, owned by Dr. Andrew Linn Nelsen, of Englewood, N. J., and built by the Banfield Sea Skiff Works, of Atlantic Highlands, N. J. An E-6 Scripps furnishes the power, and drives the boat better than 20 miles per hour—far in excess of the boat builder's guarantee of 15 miles.





It Happened Fourteen Years Ago And Is Still Being Talked About



REED & PRINCE MFG.CO.

WORCESTER, MASS. U.S.A.

October 2, 1916.

Scripps Motor Company,
Detroit, Michigan.

Gentlemen:

Happening to see a letter from you to my son, dated September 20th, I noted the cut of the motor boat "Detroit", which crossed the Atlantic in 1912) on your letterhead.

I am pleased to send you a photograph which I took in mid-ocean from the deck of the S.S. America at that time. This small motor boat was flying distress signals and the captain of the "America" stopped his ship to find out the trouble. They advised that they were needing water; and since both the steamship and the motor boat were at rest, or nearly so, it gave the writer an opportunity to get the enclosed picture, which I think was the best one taken on that trip of the "Detroit" when she crossed from Detroit, Michigan to Petrograd in Russia.

Thinking that this photograph might be interesting to you, is my reason for forwarding it.

Very truly yours,

Edgar Reed.

ER/E
Enclosure.

D-2 10-12 H. P., Medium Duty 15-18 H.P., High Speed Including Electric Starter. **$650.**

The D-2 is very popular with fishermen. It is also widely used for auxiliary work.

The little 35-ft. cruiser "Detroit," the first motor boat to cross the Atlantic under its own power. This photo was taken in mid-ocean from the decks of the S. S. America by Mr. Edgar Reed, whose letter is reproduced above.

FOURTEEN years ago a model D-2 Scripps, 12 H.P., engine powering a heavy 35 ft. boat, manned by an intrepid crew, startled the world by driving the boat from Detroit down the Great Lakes and across the broad Atlantic to Petrograd, Russia. Not only that, but it brought the boat and its crew back safely to Detroit,—a total distance of 12,000 miles. This epoch making cruise not only showed the world the greater possibilities of motor boat cruising but it proved beyond all doubt the soundness of Scripps engineering. The same dependable qualities that made possible the success of this engine's task are found in all Scripps marine engines. Many years have past since this first Transatlantic cruise of a gasoline engine powered boat. But, it is spoken of over and over again as one of the many proofs of Scripps' stamina and dependability.

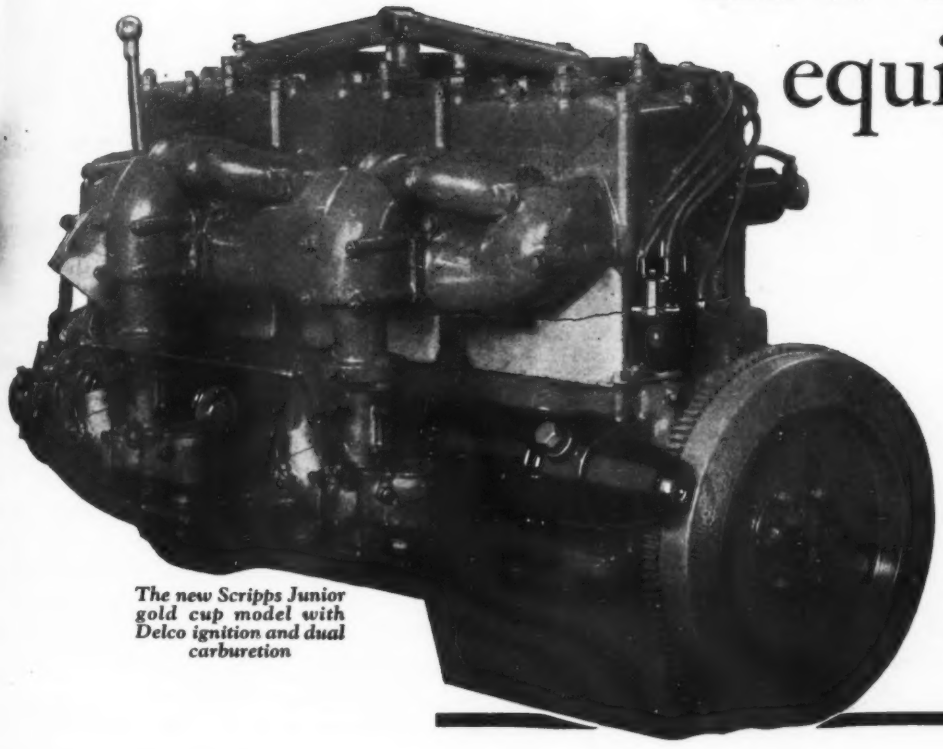
Write Today for Catalog of Scripps Marine Motors.

SCRIPPS MOTOR COMPANY

5819 Lincoln Avenue **Detroit, Michig**

Advertising Index will be found on page 334

Scripps is now Delco equipped



The new Scripps Junior gold cup model with Delco ignition and dual carburetion

DELCO electrical units are now supplied as standard equipment on the famous Scripps marine motors.

For years on America's finest cars, Delco equipment has been building an unparalleled record for efficient, dependable service.

Now this same type of electrical service is available to the motor boat enthusiasts of America. Whether your craft is a modest runabout or a fast cruiser, whether you travel at a modest seven or aspire to a strenuous seventy miles an hour, Delco electrical equipment will assure you of maximum results from your motor.

THE DAYTON ENGINEERING LABORATORIES CO.
DAYTON, OHIO, U. S. A.

WHEREVER IT MUST BE THE BEST

Delco
STARTING LIGHTING IGNITION

"Buffalo"

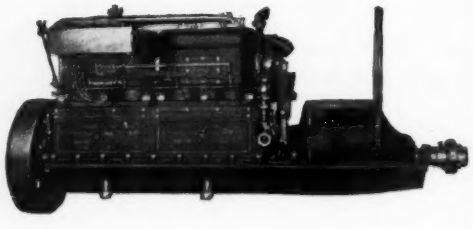
The Engine

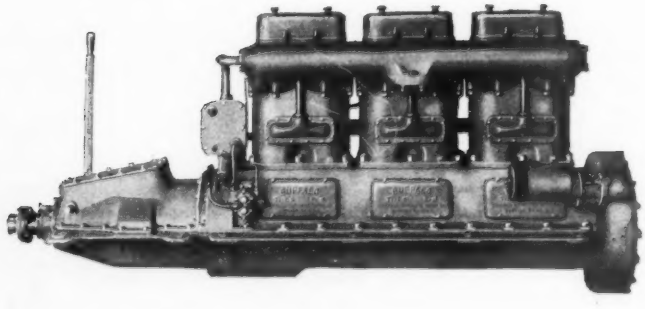
For more than 25 years—first to motor boat owners, now to a long list of other users—Buffalo Engines have been known as "The Engine of Constant Service."

In almost every country of the world they are supplying steady, unfailing power for boats of all kinds—work boats, runabouts, yachts, cruisers.

They are powering fire engines and tractors. They are standing the tremendous strain of oil well drilling. The large telegraph and telephone companies depend on Buffalo power to operate the auxiliary sets used in emergencies.

Buffalos are powering excavating machines, ditch diggers, spraying machines, wagon loaders, motor trucks, conveyors, pumping units, asphalt spreaders, generat-





Advertising Index will be found on page 384

Marine Engines

Constant Service

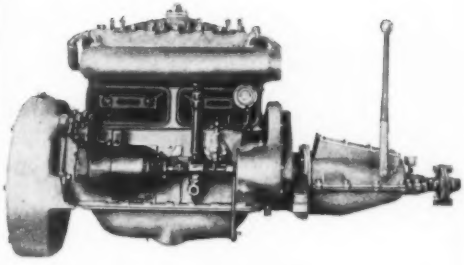
ing sets, electric welding outfits, locomotives, portable cranes.

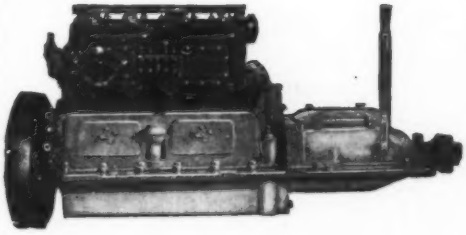
There is hardly a job requiring gas power on which Buffalos have not made good

The qualities which have enabled Buffalo Engines to win their reputation for unfailing, dependable service are built into every Buffalo Marine Engine.

When you install a Buffalo you are not only buying an engine, you are buying years of unfailing, dependable, trouble-free power and economical operation.

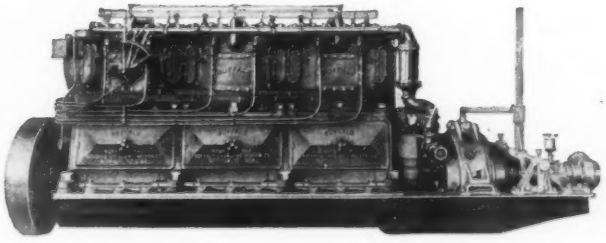
Tell us about your boat and let us suggest a Buffalo to power it.





BUFFALO GASOLENE MOTOR COMPANY

1274 Niagara Street Buffalo, N. Y.



America's Leading Marine Engine Builders

(*Continued from page 174*)

Fay & Bowen Engine Co.
Geneva, N. Y.

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Carburetor
Gobest	14	2-13/16x4	4	4	1600	365		Joes	Northeast	Battery or magneto	
LC-41	27	3½x4½	4	4	1600	560		Paragon	Northeast	Battery or magneto	
LN-42	45	4¼x5½	4	4	1400	900		Paragon	Northeast	Magneto	
LNA-42	45	4¼x5½	4	4	1400	700		Paragon	Northeast	Magneto	
LN-43	40	4¼x5½	4	4	1000	950		Paragon	Northeast	Battery or magneto	
LNS-43	60	4¼x5½	4	4	1400	750		Paragon	Northeast	Magneto	

Gray Marine Motor Company
Lafayette and Canton Avenues, Detroit, Mich.

GRAY

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
O	5	3⅜x4½	1	4	1000	165	Splash	Joes	Bosch	Bosch		Schebler
U	8	3½x3½	2	2	800	138	Splash	Gies		Bosch		Schebler
V	35	3½x5	4	4	1000	550	Pressure	Joes	Bosch	Bosch		Schebler
Z	20	3⅜x4	4	4	1500	390	Splash	Paragon	Bosch	Bosch		Schebler
ZB	16-20	3⅜x4	4	4	1200	300	Splash		Bosch	Bosch		Schebler
50	35-50	4x5	4	4	1000	900	Force feed	Joes	Bosch	Bosch		Schebler
70	45-70	4¾x6	4	4	1000	1400	Force feed	Joes	Bosch	Bosch		Schebler
6A	75	4x5	6	4	300-2600	850	Force feed	Par. Cross	Remy	Remy		Schebler

Hall-Scott Motor Car Company
461 Eighth Avenue, New York City

HALL-SCOTT

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
HSM-4	50-70	4¼x5½	4	4	1200-1800	1290	High pressure	Paragon	Delco	Delco	Champion	Zenith
HSM-6	75-100	4¼x5½	6	4	1200-1800	1590	High pressure	Paragon	Delco	Delco	Champion	Zenith
HSR-4	60-70	4¼x5½	4	4	600 or 900 of propeller	1750	High pressure	Paragon	Delco	Delco	Champion	Zenith
HSR-6	90-100	4¼x5½	6	4	600 or 900 of propeller	2200	High pressure	Paragon	Delco	Delco	Champion	Zenith
LM-4	125	5x7	4	4	1700	1200	High pressure	Paragon	Delco	Delco	Champion	Miller
LM-6	200	5x7	6	4	1700	1500	High pressure	Paragon	Delco	Delco	Champion	Miller
LM-6A	250	5x7	6	4	2000	1095	High pressure	Paragon	Delco	Delco	Champion	Miller

Hallett Manufacturing Co.
Los Angeles, Calif.

HALLETT

Model	Horse Power	Bore and Stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Ignition device	Spark plug	Carburetor
H4	8	2¼x2¾	4	4	2500	190	Splash	Own	Splitdorf Magneto	Bethlehem	Stromberg

Johnson Motor Products, Inc.
518-522 West 57th Street, New York, N. Y.

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
D12	450	5x7	12	4	1850	1250	Double force	Special	De Jon	Delco	A. C.	Zenith
Globe	500	5x7	12	4	2000	1500	Pump	Paragon	Delco	Delco	A. C.	Zenith

Jule Motor Corp.
Syracuse, N. Y.

JULE

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
50	50	4x4¼	4	4	2000	590	Full pressure	Own	Owen-Dyneto	Am. Bosch		Zenith
100	100	4x4¾	8	4	2000	846	Full pressure	Own	Owen-Dyneto	Am. Bosch		Zenith

Kermath Manufacturing Company
5890 Commonwealth Avenue, Detroit, Michigan

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
3	¾	3¾x4	1	4	800	175	Pump & Splash	Own	Bosch	Bosch	Champion	Kingsdon
4	4/5	3½x4	2	4	800	300	Pump & Splash	Own	Bosch	Bosch	Champion	Kingsdon
6	6/8	3¾x4	2	4	800	325	Pump & Splash	Own	Bosch	Bosch	Champion	Kingsdon
8	8/10	4x4	2	4	800	345	Pump & Splash	Own	Bosch	Bosch	Champion	Kingsdon
12	12	3½x4	4	4	1200	470	Pump & Splash	Own	Bosch	Bosch	Champion	Kingsdon
16	16	3¾x4	4	4	1200	500	Pump & Splash	Own	Bosch	Bosch	Champion	Kingsdon
20	20	4x4	4	4	1200	535	Pump & Splash	Own	Bosch	Bosch	Champion	Kingsdon
35	35	4⅜x5½	4	4	1200	950	Pressure	Paragon	Bosch	Bosch	Champion	Schebler
50	50	4⅜x5½	4	4	1500	690	Pressure	Paragon	Bosch	Bosch	Champion	Schebler
70	70	4⅜x5½	4	4	1800	690	Pressure	Paragon	Bosch	Bosch	Champion	Schebler
65	65	4⅜x5½	6	4	1200	1500	Pressure	Paragon	Bosch	Bosch	Champion	Schebler
100	100	4⅜x5½	6	4	1800	1075	Pressure	Paragon	Bosch	Bosch	Champion	Schebler

The Loew Manufacturing Co.
Madison Ave. & W. 90th St., N. W., Cleveland, Ohio

LOEW

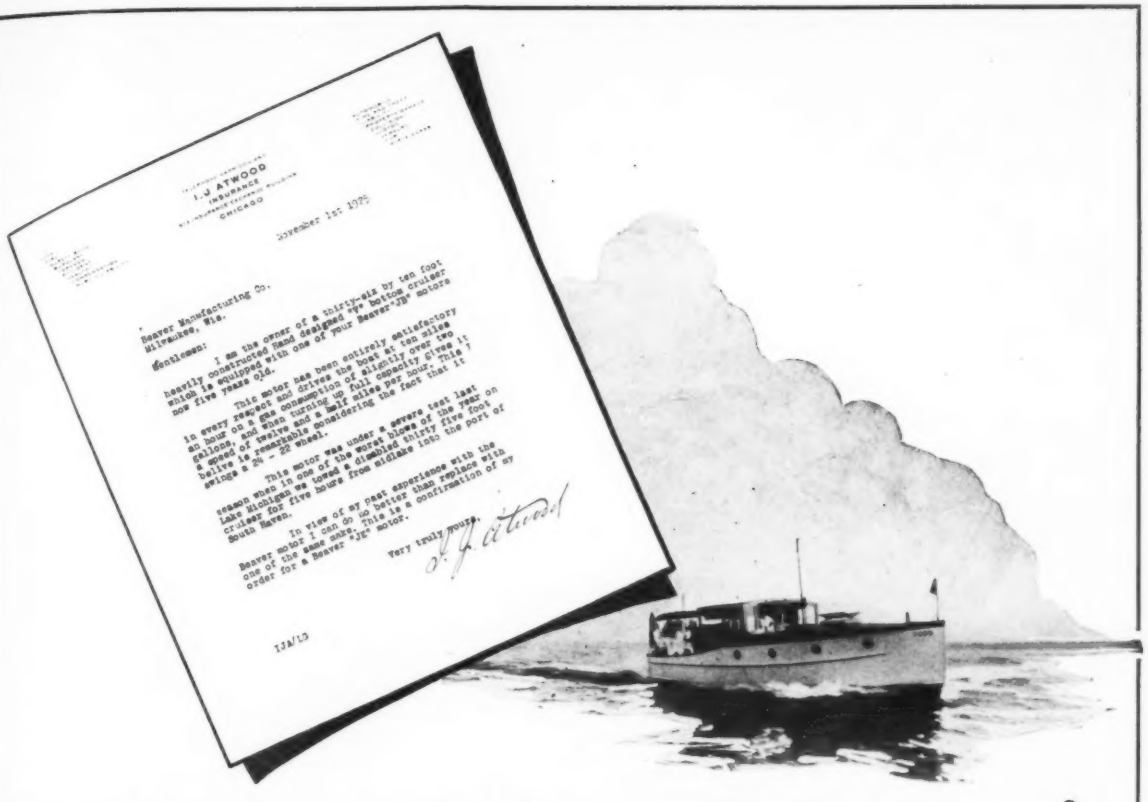
Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting Device	Ignition system	Carburetor
LKD	50-90	4¼x5½	6	4	1800	1260	Pressure	Joe's	Leece-Neville	Robert Bosch	Schebler
LKM	120	6 x9	8	4	600	5000	Pressure	Joe's	Leece-Neville	Robert Bosch	Schebler
LKM	90	6 x9	6	4	600	4000	Pressure	Joe's	Leece-Neville	Robert Bosch	Schebler
LKB	25-40	3¼x5½	4	4	1400	820	Pressure	Joe's	Leece-Neville	Robert Bosch	Schebler

Lockwood-Ash Motor Company
Cor. Jackson and Douglas Streets, Jackson, Mich.

L-A

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Ignition System
24	2½	3¼x3½	1	2	900	110	In fuel	Battery or Magneto
24	4	4 x4	1	2	900	135	In fuel	Battery or Magneto
68	6	3½x3½	2	2	1000	160	In fuel	Battery or Magneto
68	8	4 x4	2	2	1000	210	In fuel	Battery or Magneto
41	5	3¼x4	1	4	1000	160	Force feed	Battery or Magneto

(*Continued on page 222*)

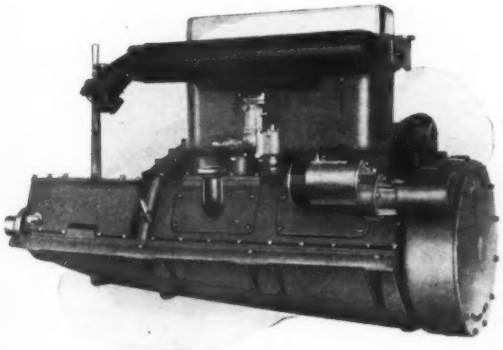

I. J. ATWOOD
INSURANCE
CHICAGO
November 1st 1925
Beaver Manufacturing Co.
Milwaukee, Wis.
Gentlemen:
I am the owner of a thirty-six by ten foot heavily constructed hand designed 24° bottom cruiser which is equipped with one of your Beaver "JB" motors now five years old.
This motor has been entirely satisfactory in every respect and drives the boat at ten miles an hour on a gas consumption of full capacity over two gallons, and when turning up full capacity gives it a speed of twelve and a half miles per hour. This I believe is reasonable considering the fact that it swings a 24 - 22 wheel.
This motor was under a severe test last season when in one of the worst blows of the year on Lake Michigan we towed a disabled thirty five foot cruiser for five hours from Midlake into the port of South Haven.
In view of my past experience with the Beaver motor I can do no better than replace with one of the same make. This is a confirmation of my order for a Beaver "JE" motor.
Very truly yours,
I. J. Atwood
IJA/LD

Consider Beaver Engines on Performance!

In the Beaver you get an absolutely trustworthy marine engine—one that has been tried and proven. One that will give you long years of dependable service at the lowest fuel consumption because the design of the manifold is favorable for present day fuel.

For example, read what I. J. Atwood, prominent Chicago insurance man, says in his letter above. Because of the unusually good performance of his 5-year old Beaver Marine Engine he purchased another Beaver.

The Beaver Marine Engine is a 4-cylinder type and is made in three models: JA 4½x6, JB 4¾x6, JE 4¾x6 high compression, dual ignition, all of which have the same over-all dimensions. It is compactly designed and built and is ideally adaptable to 35 ft. cruisers. Besides, it will perform dependably and economically on work boats.



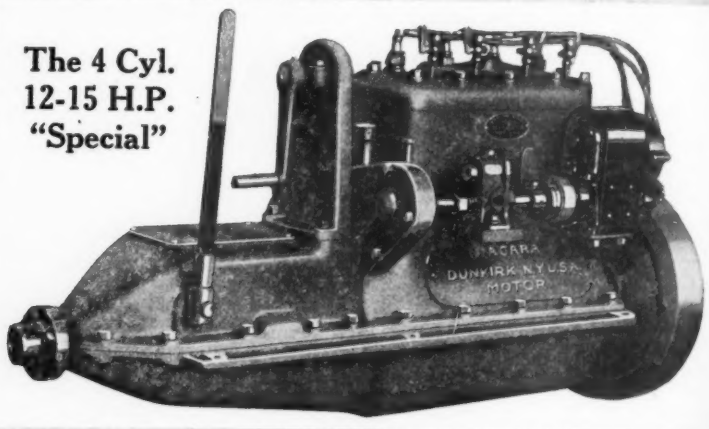
Write for our latest Marine Engine Catalog

Beaver Manufacturing Co.
Marine Division
41 25th St. Milwaukee, Wis.

for steady service
Beaver

Niagara

The 4 Cyl.
12-15 H.P.
"Special"



NIAGARA SUPE

BEFORE YOU BUY YOUR ENGINE!

It will pay you to get details of the NIAGARA line.

Over 20 years of experience has taught NIAGARA the vital necessities for marine engine duty.

NIAGARA means POWER and ECONOMY in your boat. An unfaltering long service that will give you just the kind of satisfaction you are looking for.

Tell us the size of your boat and the H.P. you expect to use. Write for catalogue.

NIAGARA MOTORS CO

PUT THE POWER OF N

Advertising Index will be found on page 384

UPERIOR ENGINES

The Niagara 4 Cyl., 12-15 H. P. "Special"

2¾" bore x 4" stroke.
For Boats 16'-30' in length. (Salt or fresh water)

A SURPRISING POWER for its size and a FLEXIBILITY with SMOOTH, QUIET running that is a revelation in marine engine service.

From slow speed of 150 R.P.M. to medium duty speed of 900-1200 R.P.M. High speed model 1800-2600 R.P.M.

An engine with a wonderful range and durability.

The Niagara 1 Cyl. (4 Cycle) 5 H.P. "Gem"

A real gem for service and low upkeep cost. Thoroughly well made, built around FORD parts, so that low priced replacements such as piston, connecting rods, valves, springs, and bearings, etc., can be any time obtained immediately. A surprising value in this low priced engine.

Write for Booklet TO-DAY. (Be sure to state size of boat and model interested.)

CORPORATION 2618-30 NIAGARA BOULEVARD DUNKIRK, N. Y., U. S. A.

OF NIAGARA IN YOUR BOAT

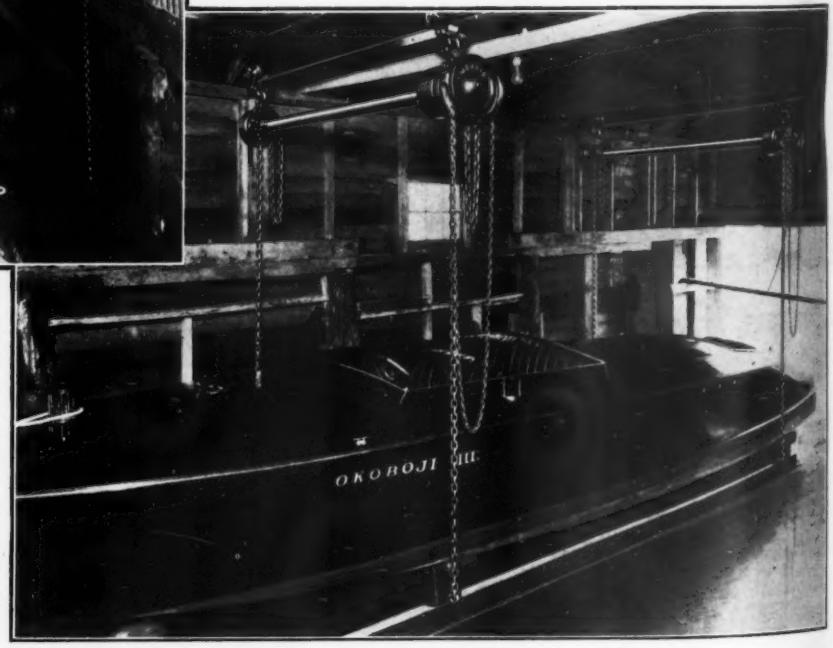
MORRIS

Twin-Lift
Triple-Gear
BOAT HOIST

THE Morris Twin-Lift Triple-Gear Hoist fills a long felt want for an easy and quick method of moving boats in a boat house, or lifting boats in a boat well. Boats up to five tons may be handled as easy as a boat of a few hundred pounds, with the aid of a Morris Twin-Lift Boat Hoist. When the boat is not in use it can be raised above the water level practically as quick as it now takes to tie up your boat. No longer need you worry about finding your boat under water. You can now keep it high and dry.

These hoists work easily and smoothly. One man, operating a light hand chain pull can raise a boat weighing as much as five tons. The load is sustained at any point by an automatic brake which offers no resistance to lifting. All gears are entirely enclosed and protected from dust and moisture.

This photograph shows how easily a boat may be lifted from the water with the Morris Twin-Lift Triple-Gear Boat Hoist, in a narrow boat well. It makes it more convenient for passengers boarding or leaving the boat.



On the right is shown how Mr. L. D. Simson, owner of Okoboji III, has equipped his boathouse with a Morris Twin-Lift Triple-Gear Boat Hoist. It is a simple matter to raise the boat from the water and run it into the boathouse. One man can now do the work of five or six men, and more quickly.

Write today for detailed descriptive literature.

HERBERT MORRIS INCORPORATED

International Manufacturers of Chain-Hoists, Monorails and Cranes

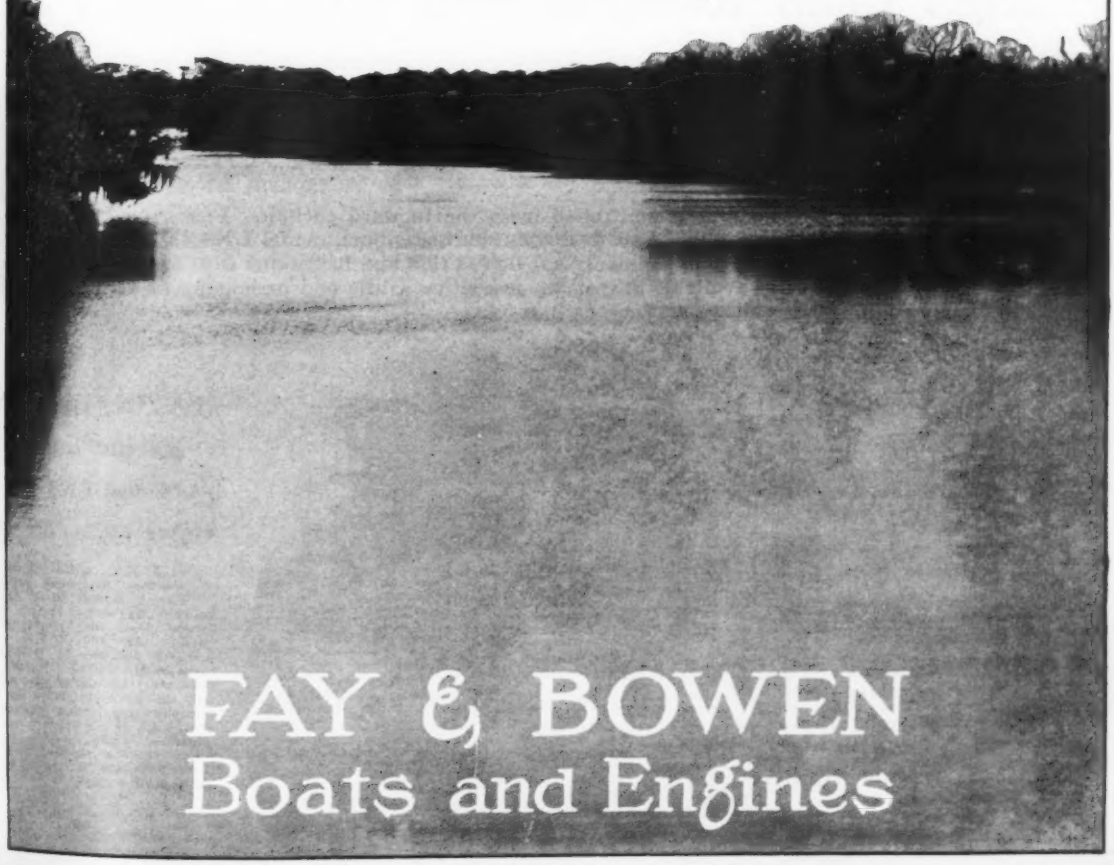
BUFFALO, NEW YORK

Advertising Index will be found on page 384

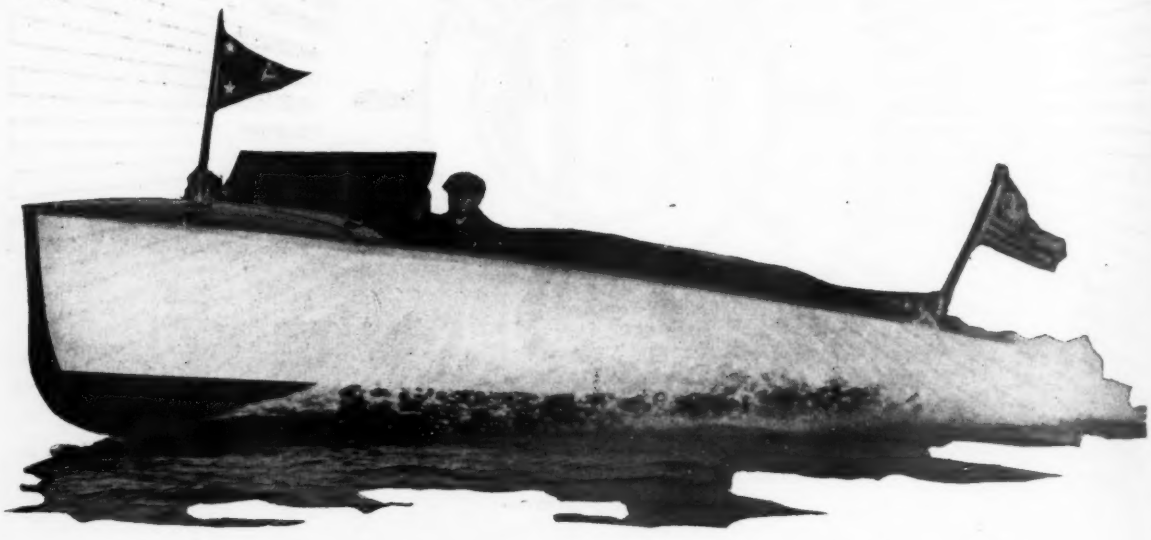
RELIABILITY
F&B

The waves are full of whispers wild and sweet;
They call to me—
Incessantly they beat,
Along the boat from stern to curved prow.

Don't you hear the call?



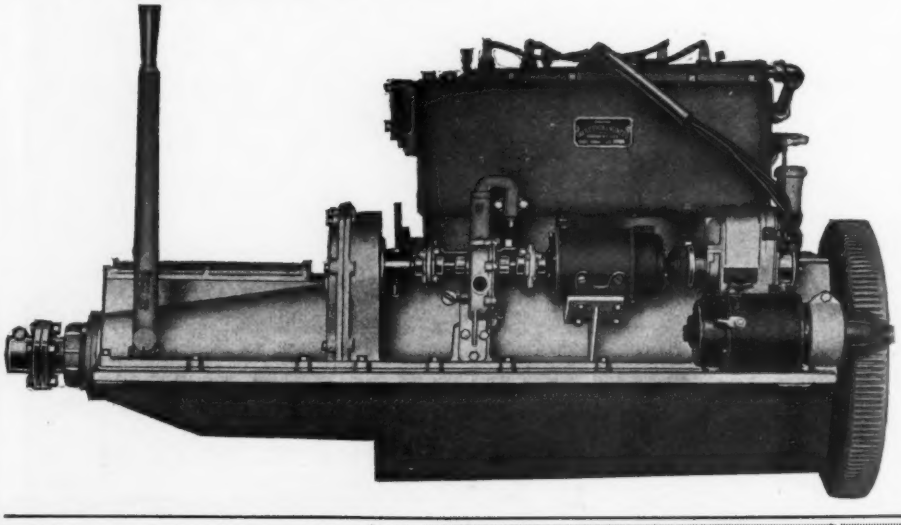
FAY & BOWEN
Boats and Engines



The Very Latest, Moderate Priced, High Class Runabout—a Thirty Footer

HERE you have a very serviceable double cockpit runabout with the seaworthiness of a cruiser. A smooth running and dry runabout with all the refinements of higher priced boats, auto control, electric starting and lighting, windshield and luxuriously upholstered seats with comfortable lazybacks. The construction is of the most substantial kind and fully conforms to the unalterable high standard of quality which has made Fay & Bowen products famous in the boating world for over a quarter century.

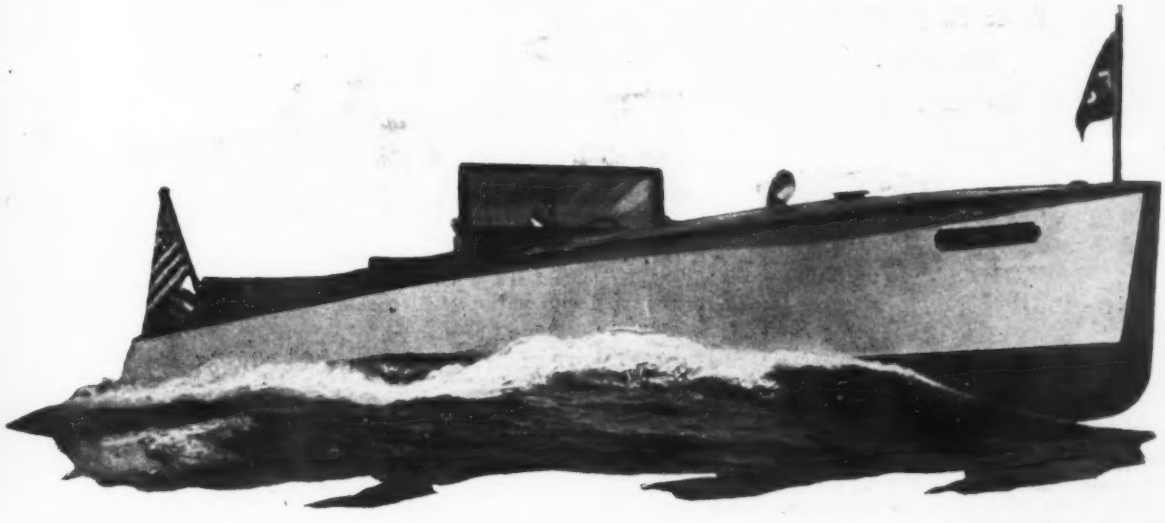
This model Fay & Bowen Runabout is controlled from the forward cockpit. Passenger capacity is provided for ten to twelve people. The Fay & Bowen marine engine, model LNS-43, a 60 H.P. high speed unit power plant, is standard equipment and drives this big, handsome runabout at a speed of 21 miles per hour. This model is available in two finishes either white and mahogany or all mahogany and is completely equipped for salt water.



FAY & BOWEN
Marine Engine
Model LNS-43
4¾" x 5½"— 60 H.P

THIS high speed engine is standard equipment for the Fay & Bowen 30 ft. double cockpit runabout. It is a unit power plant, with removable L head. At 800 R.P.M. the LNS-43 develops 38 H.P. and gives 60 H.P. at 1400 R.P.M. A convenient feature of this model and the LNA-42, shown on the opposite page is that any accessory, such as the starting motor, generator, magneto or water pump can be removed without disturbing any of the adjacent parts.

Advertising Index will be found on page 384



Here's Twenty-Seven Feet of Real Boat in a Handsome Looking Runabout

THE Fay & Bowen twenty-seven foot, single cockpit runabout is extremely popular. Beauty, seaworthiness, dependability and sturdiness are all combined in the construction of this trim and fast boat. With the Fay & Bowen model LNA-42 marine engine the speed is twenty miles an hour. The boat is perfectly dry at all speeds, the raised sheer and low bow wave throwing the spray far out to the sides. Like our other models, the twenty-seven footer has the auto type of control. The cockpit is finished in solid mahogany. All seat cushions and lazybacks are stuffed with Kapoc and upholstered in high grade leather cloth. Fitted throughout for salt water service.

When you purchase a Fay & Bowen boat powered with a Fay & Bowen Engine you have a craft the whole of which is guaranteed by one manufacturer. There is no division of responsibility between the engine manufacturer and the boat builder,—we build both the power plant and the hull.

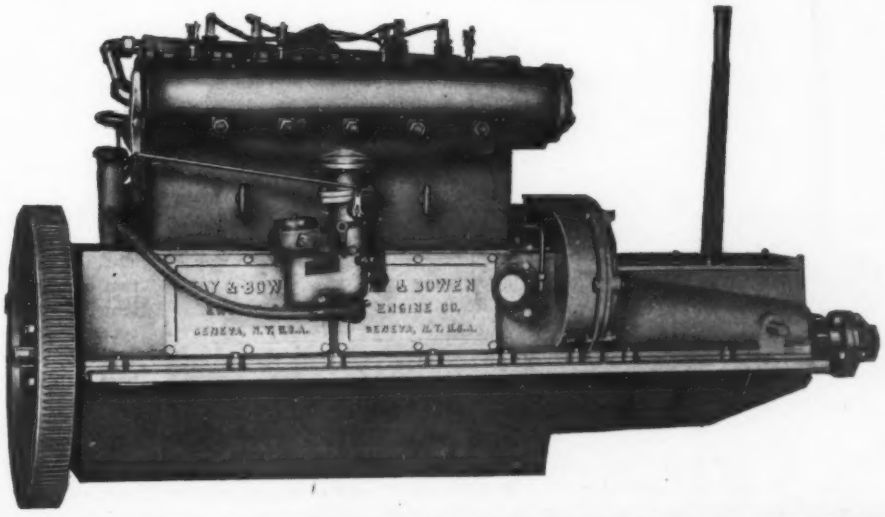
FAY & BOWEN

Marine Engine

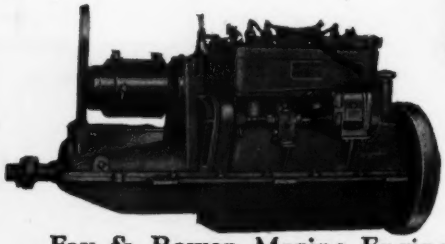
Model LNA-42

4¼" x 5½"—45 H.P.

THIS is the type engine used as standard equipment for the Fay & Bowen 27 ft. single cockpit runabout. Develops 27 H.P. at 800 R.P.M., 35 H.P. at 1000 R.P.M. and 45 H.P. at 1400 R.P.M. Weight with aluminum base is 700 lbs. and with iron base 900 lbs. Notice the generous size hand hole plates on this engine. The LNS-43, shown on the opposite page, is similarly equipped with hand hole plates. There is real accessibility to all bearings and reverse gear.



F. & B. JUNIOR
Runabout
24 ft. x 5 ft.

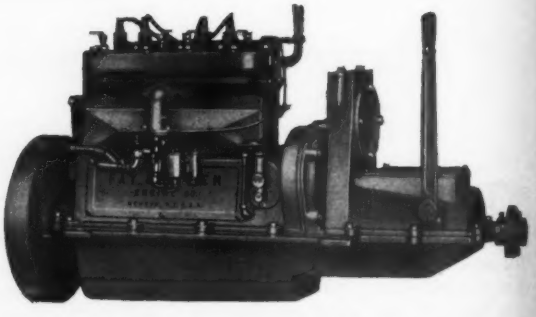


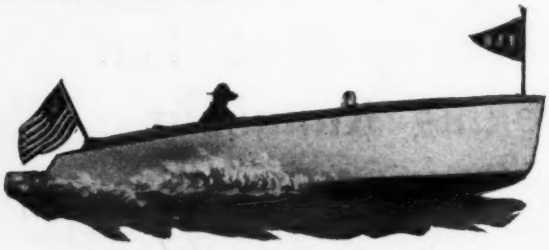
THE Junior runabout shown above is an all mahogany boat of modern design and salt water equipment. It is a smart and snappy craft powered with our type LC-41 motor, a peppy power plant which drives the boat at a speed of 17 miles per hour. The cockpit is unusually large for this size craft. All seats and lazybacks are upholstered in high grade leather cloth, Kapoc filled. The driver's seat is separate.

Fay & Bowen Marine Engine
Model LC-41. Bore 3½". Stroke 4½".

THIS is a compact and clean cut, four cylinder, unit power plant, rated 14 H.P. at 800 R.P.M. to 27 H.P. at 1400 R.P.M. The LC-41 is the regular power equipment for the Junior runabout.

GOBEST
AND IT DOES

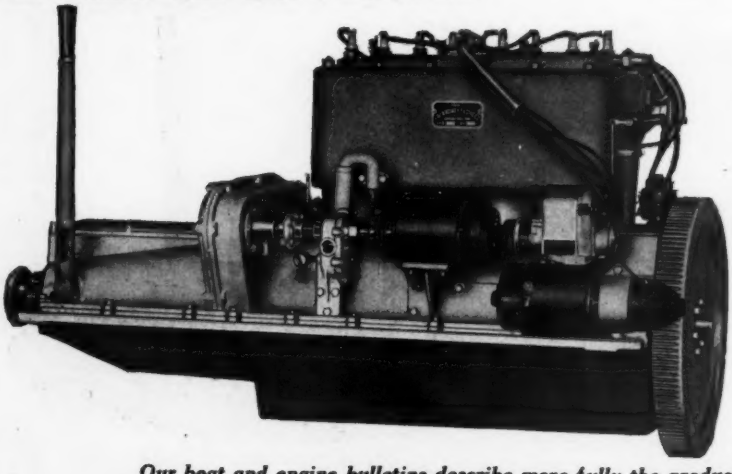




F & B Twenty Foot Runabout

THIS is the smallest Fay & Bowen standardized runabout. It has the same high standard of construction as our other models, mahogany cockpit and auto control. It's just the boat for shallow water, yet it is a thoroughly seaworthy craft in rough water. This boat is in constant demand because of its popular price and is regularly powered with the famous Fay & Bowen 14 H.P. four cylinder GOBEST engine. Speed 14 miles per hour.

THE GOBEST is a 14 H.P. engine, four cylinder and four cycle, with a bore of 2-13/16" and a stroke of 4", weighing only 365 lbs. This model is standard equipment for our twenty foot runabout. It is used extensively in launches and yacht tenders of 18 to 30 ft.



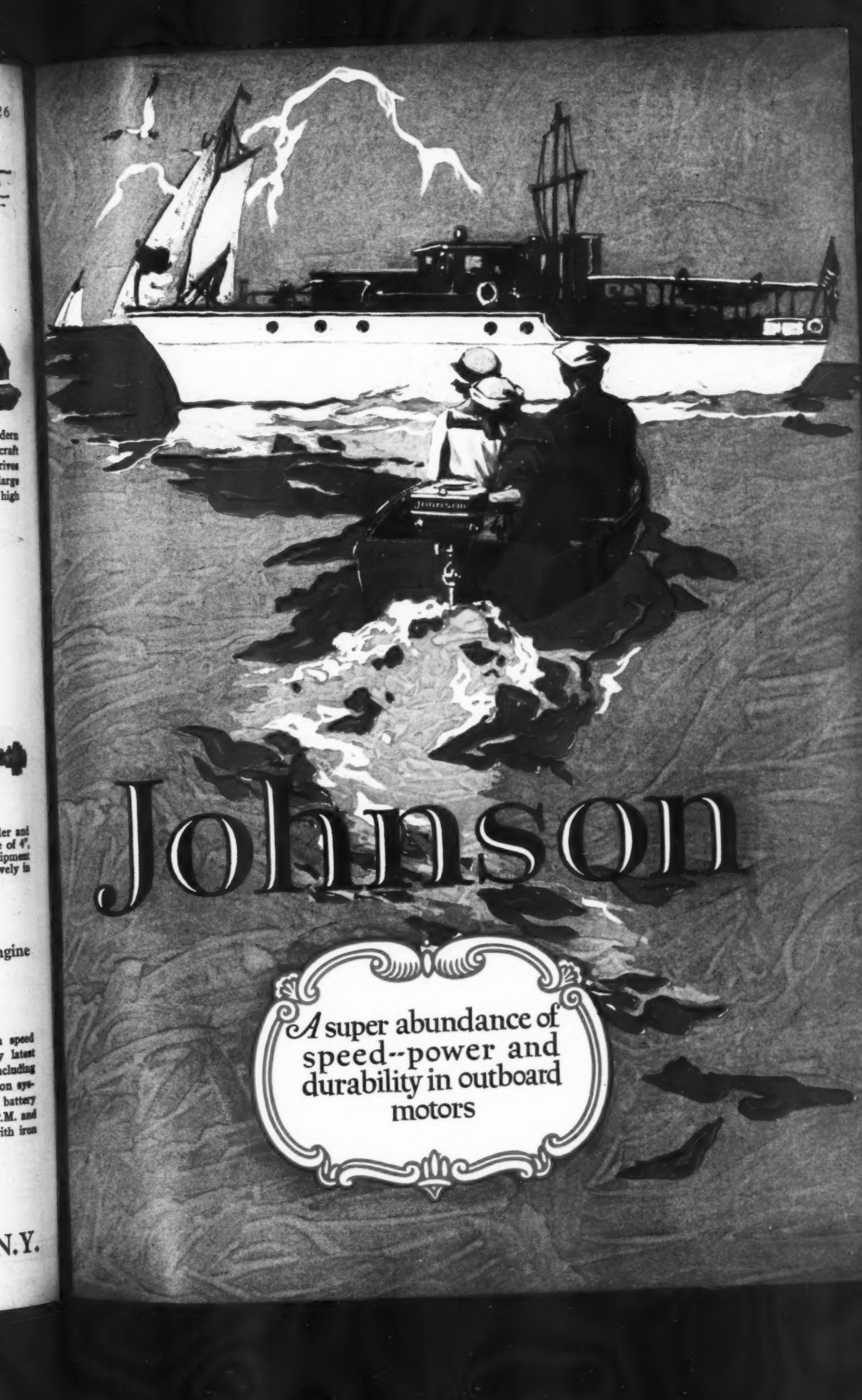
Fay & Bowen Marine Engine
Model LN-43
4¾" x 5½"—40 H.P.

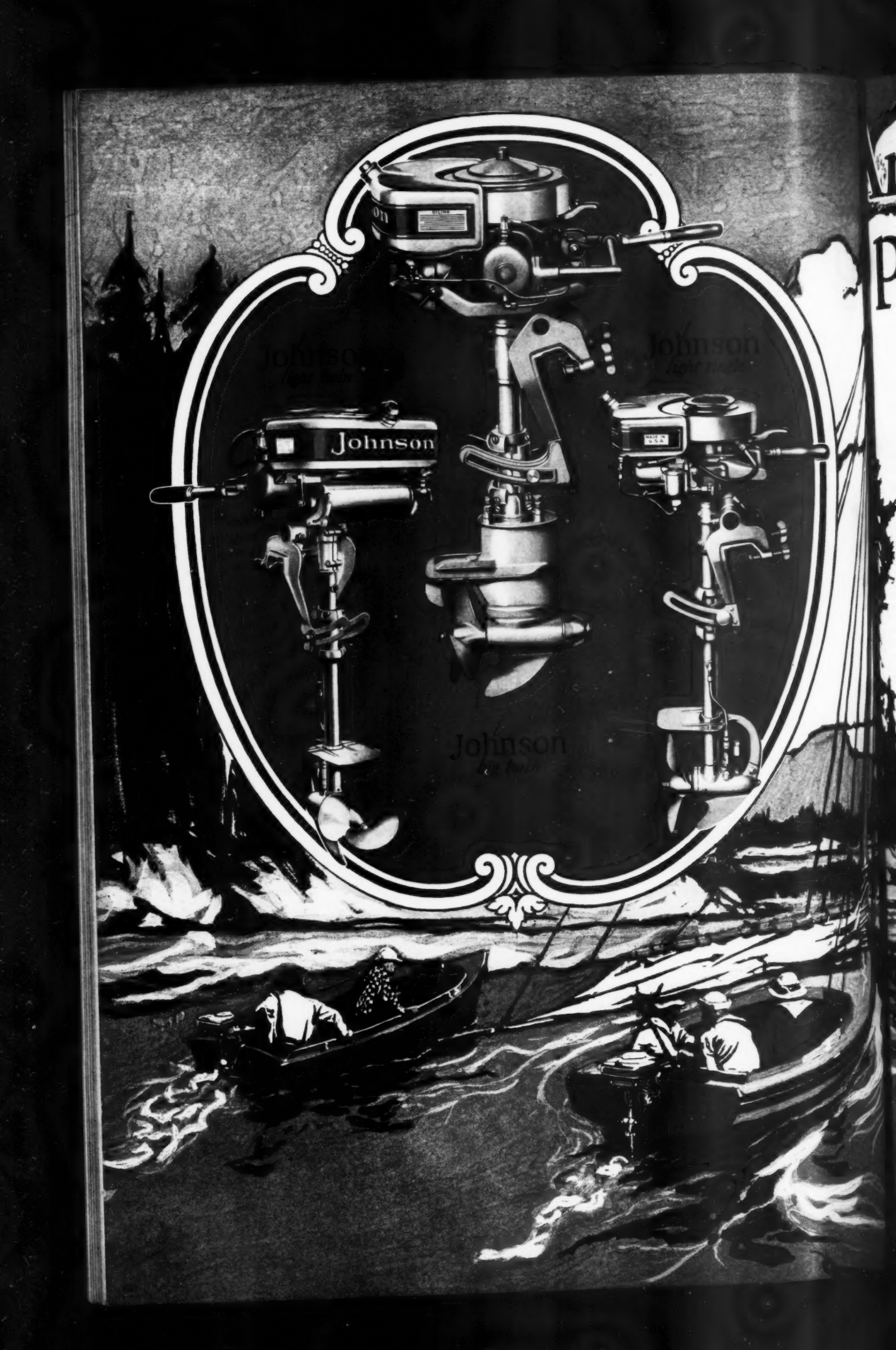
FOR cruising service our medium speed model LN-43 embodies the very latest advance in marine engine practice, including two complete and independent ignition systems, a high tension magneto and a battery system. It gives 25 H.P. at 600 R.P.M. and 40 H.P. at 1000 R.P.M. Weight with iron base 950 lbs.

Our boat and engine bulletins describe more fully the products shown in this advertisement. We will gladly send you descriptive literature on any or all of our boats and engines.

FAY & BOWEN ENGINE CO., 104 Lake Street, Geneva, N.Y.

Advertising Index will be found on page 384


Johnson
A super abundance of speed--power and durability in outboard motors


Johnson
MADE IN U.S.A.

America's *lightest-weight* portable boat motors

AMONG boating enthusiasts and yachtsmen, there is a popular liking for the Johnson Outboard Motor. It is light weight—portable; but more, it is sturdy in construction, has an abundance of power, and is extremely simple to maneuver and control.

Astern of tender or dinghy, a Johnson offers the ideal "go between" from shore to cruiser or yacht. Because it is light weight, compact, it easily stows below deck when not in use.

Sail boat owners, too, rely on a Johnson in calms rather than wait for the wind.

The surpassing fineness of Johnson motors is a result of careful experiment, development and engineering precision. Johnson engineering is responsible for Full Pivot Steering; you can direct your boat with full power, or any portion of that power, in *any* and *every* direction. This assures full control of the boat under all conditions.

The Shock Absorber Drive is another Johnson feature. Should your propellor strike any underwater obstruction such as snags, rocks or sand bars, your motor mechanism cannot be injured. With this feature the inconvenience of replacing sheer pins is eliminated.

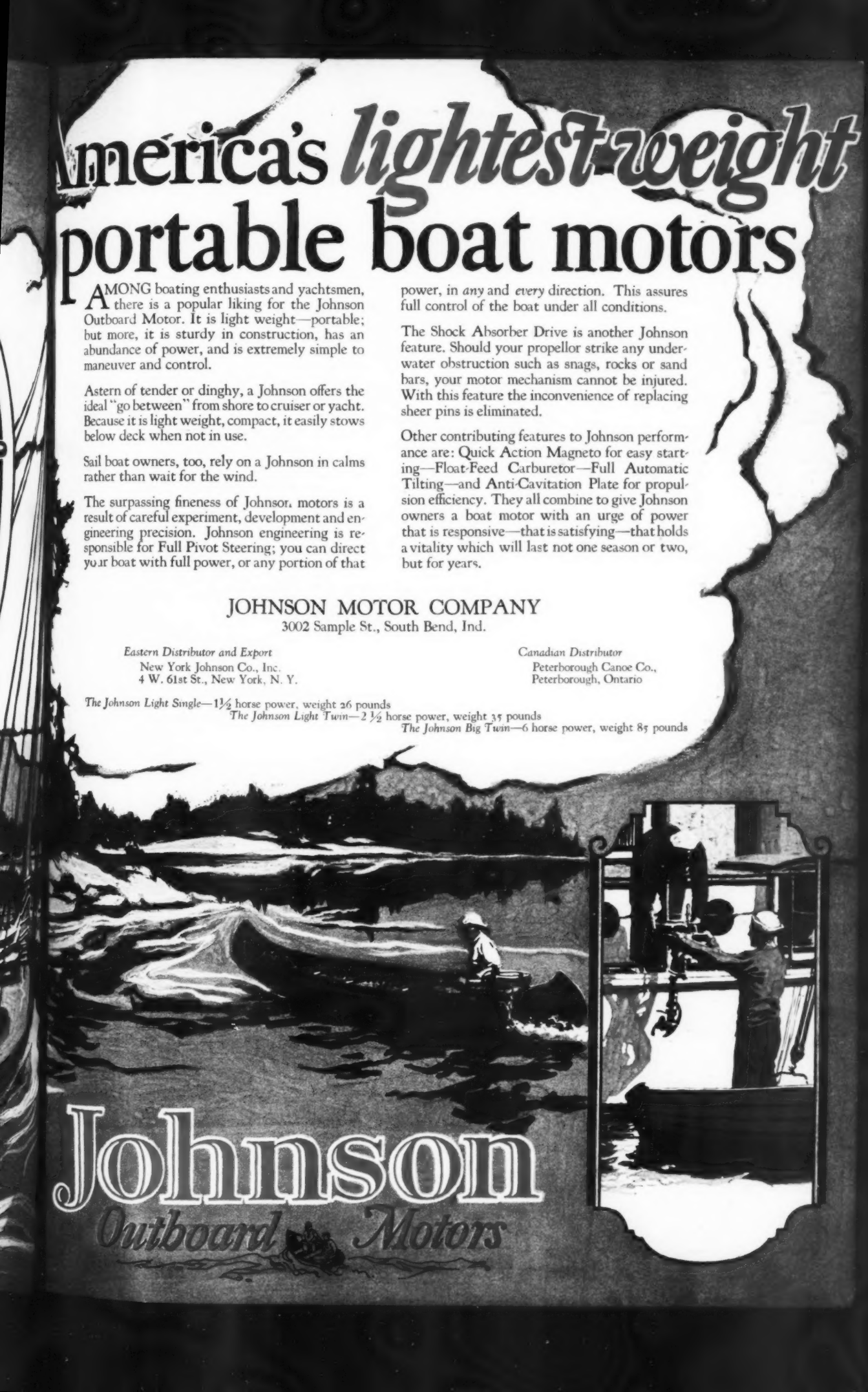
Other contributing features to Johnson performance are: Quick Action Magneto for easy starting—Float-Feed Carburetor—Full Automatic Tilting—and Anti-Cavitation Plate for propulsion efficiency. They all combine to give Johnson owners a boat motor with an urge of power that is responsive—that is satisfying—that holds a vitality which will last not one season or two, but for years.

JOHNSON MOTOR COMPANY
3002 Sample St., South Bend, Ind.

Eastern Distributor and Export
New York Johnson Co., Inc.
4 W. 61st St., New York, N. Y.

Canadian Distributor
Peterborough Canoe Co.,
Peterborough, Ontario

The Johnson Light Single—1½ horse power, weight 26 pounds
The Johnson Light Twin—2 ½ horse power, weight 35 pounds
The Johnson Big Twin—6 horse power, weight 85 pounds



Johnson
Outboard Motors

New Speed Honors *for Johnson*

FROM California to New York—from Canada to the Gulf—at the 1925 regattas held in all the important boating sections of this country, Johnson Outboard Motors won convincing victories.

At White Lake, Mich., the M. V. P. B. A. annual regatta, the Johnson Big Twin established a world record for its class with 16.68 m. p. h.

At Put-in-Bay, Ohio, the Interlake Yachting Association—Johnson Motors won six out of ten first places.

At Manhassett Bay, L. I., New York, the Gold Cup Races—Johnson Motors won five out of six events.

At Detroit, at Cincinnati, at West Palm Beach, Fla., and a score of other watering places, Johnson won new laurels.

It is significant, the fact that Johnson—lightest in weight of outboard motors, should prove its power, performance and durability with victories at these important events.

Johnson
Outboard Motors

SEASON 1926

HUBBARD H. ERICKSON & Co.

ERICO MARINE SPECIALTIES

3037 N. Western Ave. Chicago, Ill.

Standard Type Drum Steerers

Standard Type Steerer made entirely of brass and bronze fitted with corrugated mahogany birch rim suitable for small runabouts.

Diam. Wheel	Diam. Column	Diam. Drum	Length Column Bulkhead to Wheel	Weight	Stock Number	Price
14 in.	1¼ in.	4 in.	24 in.	12½ lbs.	1303	$25.00

THE GAR JUNIORS AND BABY BARS WHICH RACED IN FLORIDA LAST WINTER ARE EQUIPPED WITH HUBBARD H. ERICKSON & CO. MARINE EQUIPMENT.

Jas. Gar Wood

New Auto Type Drum Steerers With Adjustable Angle

This new type drum steerer incorporates the use of the latest model automobile steering wheel with genuine walnut rim and genuine walnut four spoke wooden spider. The new type short spark and throttle levers same as used in late model high grade cars, also have been adapted to this marine steerer. Also has electric horn button mounted in center, wired through column. The outside brass column is stationary and does not turn with the wheel. The inside steering column is packed in grease. 18" corrugated rim with four spoke wooden spider. This is the strongest, most substantial, and best finished drum steerer on the market.

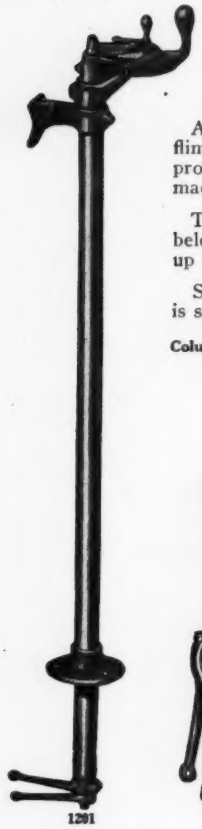
Diam. Wheel	Diam. Column	Diam. Drum	Column Length Bulkhead to Wheel	Weight	Stock Number	Price
18 in.	1⅞ in.	3½ in.	20 in.	20 lbs.	1304	$40.00

New Auto Type Drag Link Steerer With Adjustable Angle

This new runabout steerer is gaining popular favor with designers and builders preferring the ropeless type. It has many advantages over common drum types; simple to install; positive and very powerful, and requires no attention after it is installed. 18 inch genuine walnut wheel, handle grip type rim, and genuine walnut four spoke wooden spider. New type short spark and throttle levers. Horn button in center. In place of a drum, an auto truck type worm steering gear is used, operating forged steering arm with ball joint at outer end. A separate steering arm of similar type is furnished with this steerer for use on the rudder post. These two steering arms are equipped with fittings so that the Steerer and Rudder may easily be connected together with galvanized iron pipe. The outside brass column does not turn with the wheel. Steering column and worm gears are packed in grease. Very substantial and beautifully finished.

Diam. Wheel	Diam. Column	Length Column Bulkhead to Wheel	Weight	Stock Number	Price
18 in.	1⅞ in.	20 in.	27½ lb.	1305	$60.00

ERICO Marine Specialties



Column Spark and Throttle Control

CRUISER TYPE

A high-class cruiser should not be cheapened in appearance by installing a flimsy control. We offer here a substantially constructed, highly finished product which will add a touch of distinction to any boat. All bronze, machined throughout.

The bracket, which attaches to wheel box or bulkhead, and the control arms below, can be adjusted to any horizontal angle; and deck flange can be moved up or down on column, according to requirements of installation.

Standard height of column, 48 inches, will be furnished unless other height is specified. Additional charge for extra length.

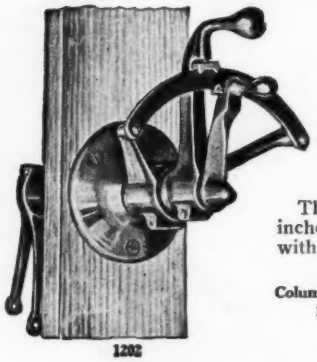
Column Diameter	Weight	Stock No.	Price
1¼ in.	11 lbs.	1201	$22.00

1201

AM PLEASED TO ADVISE I USED ERICO EQUIPMENT ON THE CHAMPION "MISS QUINCY VII," SUCH AS SPARK AND THROTTLE ICONAROLS, WATER INLET AND OUTLET FITTINGS, UNIVERSAL STUFFING BOX, ETC. IN ALL MY BOATS I USE ERICO ACCESSORIES AND FIND THEM VERY SATISFACTORY.

C. E. Padgett

Bulkhead Spark and Throttle Control



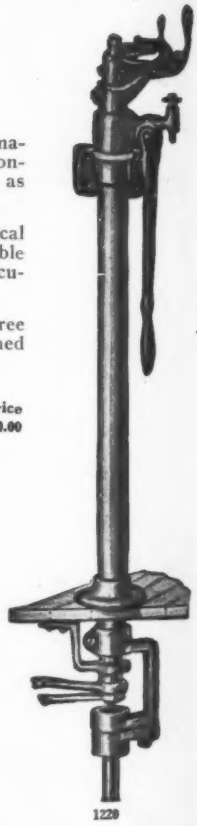
1202

An all bronze, heavily constructed control, machined throughout and highly finished. The control handles and quadrant are of the same type as those on our column control, above.

This control can be installed in either a vertical or horizontal position. Control arms are adjustable to any angle, perpendicular to tube, as the particular installation may require.

The tube which extends through bulkhead is three inches in depth from base of flange. Can be furnished with longer tube at a small additional charge.

Column Diameter	Weight	Stock No.	Price
1¼ in.	5 lbs.	1202	$20.00



1220

Spark, Throttle and Clutch Levers

A combination that will save valuable deck space and simplify an otherwise awkward installation. The entire control of engine being at one convenient point where wanted.

Bracket for attaching to wheel box or bulkhead is adjustable and can be set at any height.

Clutch lever is hinged and is fitted with wing screw so that lever can be made stationary in horizontal position if desired.

Made entirely of bronze and brass. Machined and highly finished throughout.

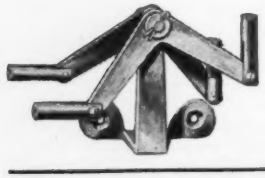
Standard height from deck to top of controls is 42 inches. Additional charge for longer lengths.

Column Diameter	Weight	Stock No.	Price
1⅝ in.	31 lbs.	1220	$80.00

Upright Bracket Control Crank

For changing direction of application of control in spark and throttle control installations.

Style	Bronze Stock No.	Price
With double crank	1206	$1.75
With single crank	1207	1.10



Side Bracket Control Crank

Style	Bronze Stock No.	Price
With double crank	1208	$1.75
With single crank	1209	1.10

Control Rod Socket

For use in spark and throttle control installations. Tapped with U. S. standard thread.

For Rod Diam.	Finished Brass Stock No.	Price
¼ in.	1204	$0.25

HUBBARD H. ERICKSON & CO. 3037 N. Western Ave., Chicago, Ill.

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ERICO Marine Specialties

Yacht Bell

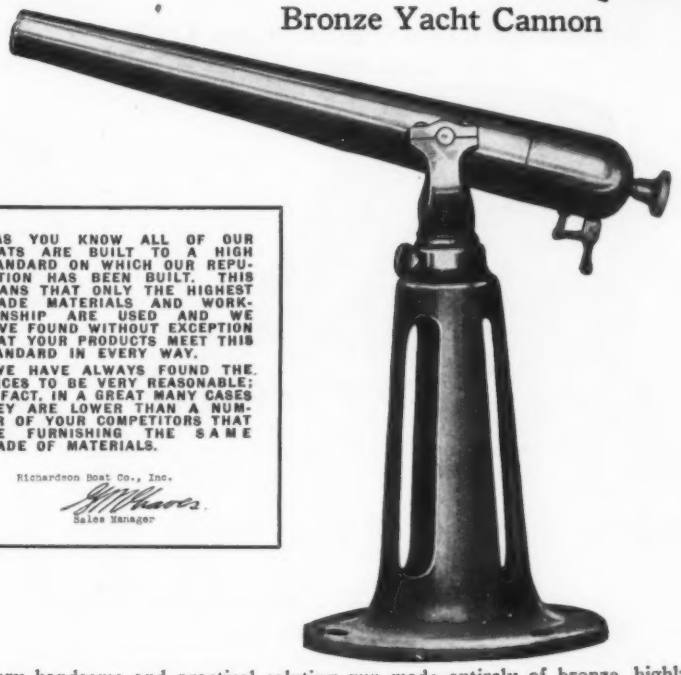
Highly polished, cast bell metal with detachable bracket.

Diameter	Projection Over All	Weight	Stock No.	Price
6 in.	8¼ in.	8¾ lbs.	515	$12.00

WE HAVE USED A NUMBER OF YOUR SPARK, THROTTLE, AND CLUTCH CONTROLS, AND THIS EQUIPMENT IS PROVING HIGHLY SATISFACTORY ON OUR BOATS. IT IS SUBSTANTIAL AND, AT THE SAME TIME, COMPACT AND EASILY INSTALLED.

DETROIT BOAT MOTOR MFRS.

Bronze Yacht Cannon



AS YOU KNOW ALL OF OUR BOATS ARE BUILT TO A HIGH STANDARD ON WHICH OUR REPUTATION HAS BEEN BUILT. THIS MEANS THAT ONLY THE HIGHEST GRADE MATERIALS AND WORKMANSHIP ARE USED AND WE HAVE FOUND WITHOUT EXCEPTION THAT YOUR PRODUCTS MEET THIS STANDARD IN EVERY WAY.

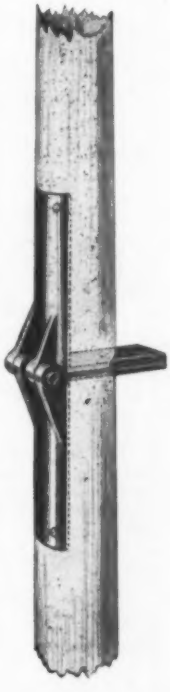
WE HAVE ALWAYS FOUND THE PRICES TO BE VERY REASONABLE; IN FACT, IN A GREAT MANY CASES THEY ARE LOWER THAN A NUMBER OF YOUR COMPETITORS THAT ARE FURNISHING THE SAME GRADE OF MATERIALS.

Richardson Boat Co., Inc.
Sales Manager

A very handsome and practical saluting gun made entirely of bronze, highly polished and machined. Breech loading. Bored for 10 gauge blank shells only.

Length of Barrel	Height Over All	Diam. of Base	Weight	Stock No.	Price
18 in.	16 in.	8 in.	30 lbs.	6002	$100.00

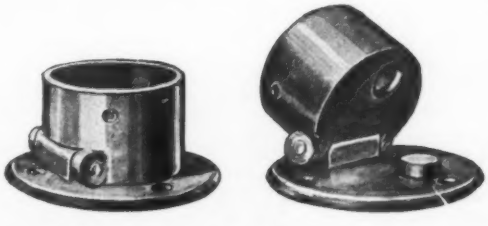
Mast Hinge



Polished cast bronze designed to hinge mast at canopy or deck house roof, or at any other point. The horizontal arms are 8" long, which allows for spar from 3" to 6" diameter; also for fastening to cabin roof. Horizontal arms can be cut off to conform with diameter of spar if projection is not required for fastening to deck house.

Height Over All	Width	Weight	Stock Number	Price
16 in.	2⅝ in.	7 lbs.	6010	$16.00

Hinged Mast Step



Permits mast to be lowered parallel to deck. The right hand illustration shows step partially turned down.

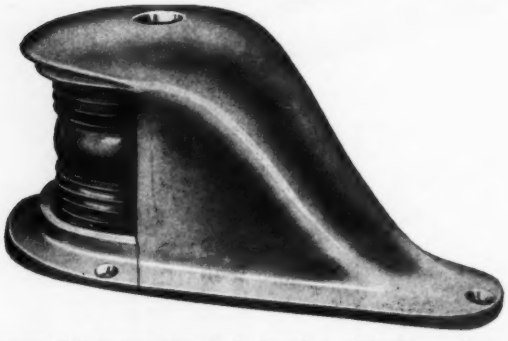
Mast Step Diameter	Base Flange Diameter	Weight	Polished Bronze Stock No.	Price
3½ in.	5 in.	4½ lbs.	581	$7.50

HUBBARD H. ERICKSON & CO. 3037 N. Western Ave., Chicago, Ill.

ERICO Marine Specialties

Erico Streamline Combination Light

CLASS ONE



A beautiful fixture that is in keeping with the modern runabout. Its stream lines mold in with the lines of the boat itself. Made entirely of bronze and highly polished. Socket in center for flag pole.

Base Dimensions	Height Over All	Weight	Stock No.	Price
6½x10¾ in.	4¼ in.	5¼ lbs.	4408	$16.00

Erico Electric Stern Light

A sturdy polished bronze fitting which adds to its function as a light a touch of class.

Any height desired can be secured by substituting required length of 1 in. I. P. S. brass tube (standard threaded) for the brass nipple joining the two parts of pedestal in stock article.

Base diameter, 4⅛ inches. Fresnal lens, 3½ in. diam. by 3 in. high in clear. Fitted with double contact bayonet base socket for bulb. Weight, 11 lbs.

Stock No.	Price
4405	$10.00

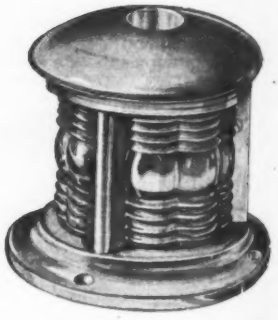
Combination Electric Post Light

CLASS ONE

This post light can be used in place of the regular side lights on Class One boats under 26 feet in length, also serves as a mooring bitt and flag pole socket.

Highly finished in bronze or aluminum, fitted with double contact base socket for bulb and regulation size Fresnal lenses.

New type retainer prevents rattling of lenses.



	Height	Base Diameter	Weight	Stock No.	Price
Bronze	5¼ in.	6⅜ in.	5½ lbs.	4406	$12.00
Aluminum	5¼ in.	6⅜ in	2½ lbs.	4407	12.00

Combination Electric Post Light

CLASS TWO

This electric post light can be used in place of the regular bow light on Class 2 boats, and serves as a riding bitt or snubbing post as well.

A highly polished heavy bronze casting, fitted with double contact bayonet base socket for bulb and regulation size Fresnal lens. A new type retainer prevents any rattling of the lens.

The socket in center of top is for flagpole.

Height	Base diameter	Weight	Stock No.	Price
6¼ in.	7 in.	8¼ lbs.	4404	$12.50

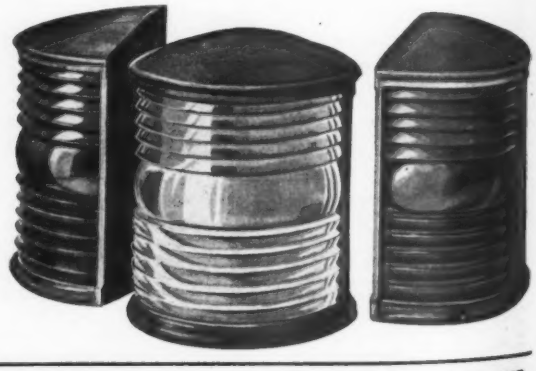
Electric Running Lights

POLISHED BRONZE

The frame of each of these lights is a single bronze casting, with reinforcing post on each side of bow light and on outer edge of side lights. The Fresnal lens, regulation size, is firmly held by a **new type retainer.** Fitted with double contact bayonet base socket for bulb.

The side lights are made in three sizes, for boats of Class 1, Class 2 and Class 3.

The bow light is made in two sizes, for boats of Class 2 and Class 3.



Class	Height	Weight	Set	Stock No.	Per Set
1	4¼ in.	3 lbs.	Pair Side Lights	4401	$8.00
2	5½ in.	8 lbs.	Three	4402	15.00
3	6½ in.	11 lbs.	Three	4403	20.00

HUBBARD H. ERICKSON & CO. 3037 N. Western Ave., Chicago, Ill.

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ERICO Marine Specialties

PORT LIGHTS

BRONZE

The Erico improved type inside port light is designed with a copper screen as an integral part of the port light. These ports can be opened and closed without removing the screen. The screen is firmly held in the body of the port light from the inside with four brass machine screws, and is removable. Each port light furnished complete with screen and outside finishing ring. All exposed parts smoothly finished and highly polished without the usual rough spots around lugs and hinges. The 6" size is made with one clamp; larger sizes have two clamps. In ordering specify exact length of sleeve required.

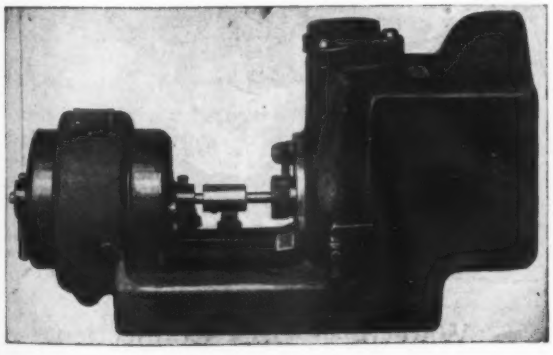
Size of Opening	Length of Rim 1¾ in. and under		Length of Rim 2 to 2½ in.		Length of Rim 3 inches		Length of Rim 4 inches	
	Plain Brass	Polished Brass	Plain Brass	Polished Brass	Plain Brass	Polished Brass	Plain Brass	Polished Brass
4 inches	$ 5.35	$ 6.60	$ 6.50	$ 7.95	$ 7.70	$ 8.80	$ 8.50	$ 9.35
5 inches	6.35	7.70	7.45	9.05	8.25	10.45	9.50	11.00
6 inches	7.85	9.90	8.90	10.80	10.45	12.10	11.45	13.20
7 inches	9.90	11.90	10.80	12.80	12.05	13.75	13.55	15.40
8 inches	11.90	13.75	12.65	14.85	14.85	15.95	16.85	18.70
9 inches	16.05	18.70	17.60	22.00	19.80	23.10	22.00	25.85
10 inches	23.10	27.50	25.10	28.60	27.50	30.80	29.70	33.00

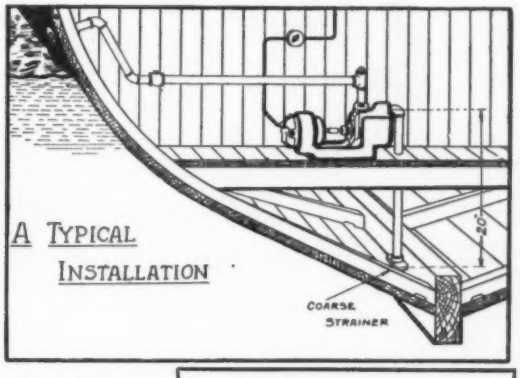
If screens are required add to above prices as follows:

4 inches	$0.60	8 inches	$1.10
5 inches	.85	9 inches	1.25
6 inches	.90	10 inches	1.50
7 inches	1.00		

Erico Electric Bilge Pump

24, 32 or 110 Volts





A compact, independent unit of small dimensions and large capacity. For permanent installation anywhere near the bottom of a motor boat or cruiser. An effective agent at a reasonable price, meeting a need long felt by boatmen.

Always ready to go! At the turn of a switch conveniently placed, it starts and does the work, so long as there is a little current in the storage battery. No need to start the boat's engine to operate pump.

Requires no priming. The chamber of this pump is so constructed that it retains water when idle, and thus preserves the prime. As the pump requires no attention when its function is needed and does not get out of order, it may be installed in an out-of-the-way place, saving useful room for other purposes.

ON OUR TRIP TO SOUTH AMERICA, NEPENTHE II WAS EQUIPPED WITH AN ENRICO ELECTRIC BILGE PUMP, AND IT GIVES ME PLEASURE TO INFORM YOU THAT IT WORKED SATISFACTORILY AT ALL TIMES.

NO MATTER HOW ROUGH THE SEAS, IT ALWAYS STARTED WHEN CALLED UPON AND PUMPED OUT THE BILGE QUICKLY AND THOROUGHLY.

AS A RULE IT NEVER REQUIRED MORE THAN TWO MINUTES TO EMPTY THE BILGE; IT THREW SUCH A GOOD STRONG STREAM.

I CAN HEARTILY RECOMMEND IT TO PROSPECTIVE PURCHASERS.

MADE ENTIRELY OF BRONZE

Type F	Stock No.	Length Over All	Width Over All	Height Over All	Base	Weight	Motor	Tapped for Pipe Suction	Tapped for Pipe Discharge	Capacity Per Min.	*Lift Suction End	Price
	806	13½ in.	5½ in.	7½ in.	7½x5½	21 lbs.	⅛ H. P.	1 in.	1 in.	10 gals.	30 in.	$90.00

*Lift on suction end can be increased by reducing size of pipe on suction end.

HUBBARD H. ERICKSON & Co. 3037 N. Western Ave., Chicago, Ill.

ERICO Marine Specialties

Combination Flag Staff and Electric Stern Light

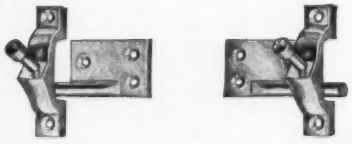
MAHOGANY

Combination aft flag staff and electric stern light, genuine mahogany, with brass ferrule. Fitted with polished bronze electric fixture and Holophane globe, wired complete with electric connector. All wires concealed.

Length Over All	Diameter Base	Weight	Stock No.	Price
45 in.	1¼ in.	1¾ lbs.	6004	$10.00

Price does not include flag.

Combination Sash Hinge



These hinges are fitted with knurled head screws which lock window when closed and also serve as anti-rattlers.

Set consists of right and left spuds and two brackets fitted with adjusting screws.

Dimensions Spud Base	Dimensions Bracket Base	Weight per Set	Stock No.	Price per Set
1x1½ in.	½x2¼ in.	⅝ lb.	1918	$2.00

WE HAVE BEEN USING A NUMBER OF YOUR ERICO MARINE SPECIALTIES AS STANDARD EQUIPMENT ON MANY OF OUR STANDARDIZED CRUISERS AND WE DO NOT HESITATE TO SAY THAT THEY ARE GIVING EXTREMELY GOOD RESULTS AND WE HAVE HAD MANY FAVORABLE COMMENTS ON THIS EQUIPMENT. WE ARE VERY GLAD INDEED TO RECOMMEND THEIR USE AND SHOULD YOU SO DESIRE, WOULD BE PLEASED TO GIVE ANY INFORMATION TO PROSPECTIVE CUSTOMERS AS TO THE RESULTS OBTAINED FROM ANY OF YOUR EQUIPMENT WHICH WE ARE USING.

RED BANK YACHT WORKS
Pres.

Bow Flag Staff

MAHOGANY

Bow flag staff, genuine mahogany, well made and nicely finished in spar varnish.

Length Over All	Diameter Base	Weight	Stock No.	Price
26 in.	1¼ in.	½ lb.	6005	$2.00

Price does not include flag.

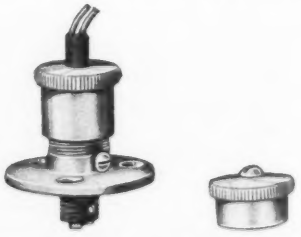
Stern Flag Staff Socket

POLISHED BRONZE

Made for use with combination aft flag staff and electric stern light. Open base for stern light wires, and fitted with knurled head set screw to hold flag staff in place and keep electric connector on deck when flag staff is removed. For 1¼" flag staff.

Length	Width	Weight	Stock No.	Price
3¾ in.	4 in.	1 lb.	6003	$2.00

Watertight Deck Connection



A small, compact fitting made entirely of brass. Connector is double contact.

Diameter Over All	Height Over All	Weight	Stock No.	Price
1¾ in.	1½ in.	¼ lb.	6007	$2.00

HUBBARD H. ERICKSON & CO. 3037 N. Western Ave., Chicago, Ill.

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ERICO Marine Specialties

Mazda Electric Bulbs

FOR MARINE USE

Double Contact Bayonet Base

(Used in Our Running Lights and Dome Lamp and Stern Lights)

Volts	Watts	Bulb	Glass	Stock No.	Price
6	4	G 8	Clear	201	$0.25
12	4	G 8	Clear	202	.30
24	4	G 8	Clear	203	.45
32	8	G10	Clear	204	.40
110	15	G16½	Clear	205	.60

Medium Screw Base

(Used in Our Bracket Lamp)

Volts	Watts	Bulb	Glass	Stock No.	Price
6	15	G16½	Frosted	206	$1.00
12	15	G16½	Frosted	207	.80
24	21	G16½	Frosted	208	.85
32	15	G18½	Frosted	209	.70
110	15	G18½	Frosted	210	.70

Medium Screw Base

(Used in Our Searchlight)

Volts	Watts	Bulb	Glass	Stock No.	Price
6	108	G30	Clear	211	$1.50
12	108	G18½	Clear	212	3.50
24	200	G30	Clear	213	1.75
32	200	G18½	Clear	214	3.50
110	200	G18½	Clear	215	3.50

JOHN H. WELLS
NAVAL ARCHITECT — YACHT BROKER
347 MADISON AVENUE — NEW YORK CITY
TEL. MURRAY HILL 3810

IN CONNECTION WITH OUR DESINGING WORK, WE HAVE SPECIFIED CERTAIN ERICO MARINE SPECIALTIES FOR THE REASON THAT MANY OF YOUR FITTINGS ARE PARTICULARLY WELL ADAPTED FOR THE DIESEL CRUISING YACHTS IN WHOSE DESIGNS WE HAVE SPECIALIZED.

IN THIS CONNECTION I WISH TO ADD THAT IT IS ALWAYS A PLEASURE TO DO BUSINESS WITH YOUR CONCERN AS I HAVE WORKED WITH YOU ON VARIOUS CONTRACTS FOR THE PAST TWELVE YEARS, AND HAVE ALWAYS FOUND YOUR MATERIAL TO BE OF THE VERY BEST QUALITY AND YOUR BUSINESS DEALINGS ON THE SQUARE.

John H. Wells

One Light Electric Bracket

Most compact fixtures of cast bronze, highly polished, with medium screw base sockets. Cut shows standard G-18½ round frosted bulb.

Base 2"x2".
Drop over all, less lamp, 2⅜".
Projection, less lamp, 2¾".
Weight, ⅞ lbs.
Without Switch—Stock No. 3020. Price...$3.50
With Switch—Stock No. 3021. Price..... 4.50
Prices do not include lamps.

Electric Bracket with Holophone Shade

Hangs close to wall, out of way.

Bracket of highly finished cast bronze.

Cannot rattle. The holophone shade is held firmly in place.

This light is fitted with pull-chain switch. Medium screw base socket.

Extreme Height	Extreme Projection	Weight	Stock No.	Price
6 in.	4½ in.	2 lbs.	3001	$7.00

Prices do not include lamps.

Electric Dome Lamp

Highly finished cast bronze, hingeless, with silver-plated reflector and holophone shade.

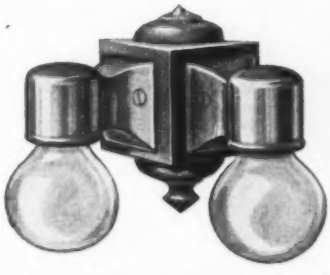
5 in. fitted with double contact bayonet base socket. Weight, 1½ lbs.

8 in. fitted with medium screw base socket. Weight, 2¾ lbs.

Diam. Over All	Depth Over All	Without Switch Stock No.	Without Switch Price	With Switch Stock No.	With Switch Price
5 in.	3 in.	3003	$6.00	3007	$7.00
8 in.	4¼ in.	3004	10.00	3008	12.00

Price does not include lamps.

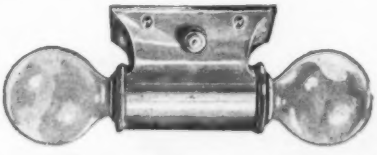
Two Light Electric Bracket



This two light bracket fixture is made up with two Stock No. 302 mounted on mahogany base.

Base, 4"x4".
Projection, less lamps, 3¼".
Width, less lamps, 6".
Weight, 2 lbs.
Without Switch—Stock No. 3022. Price.....$8.00
With Switch—Stock No. 3023. Price.....10.00
Prices do not include lamps

Two Light Ceiling Fixture



Designed for use between roof carlins and wherever headroom is limited. Also makes an excellent wall fixture. Cast bronze, highly polished. Medium screw base sockets.

Base 2"x3½".
Projection, less lamps, 2⅝".
Weight, 1 lb.
Stock No. 3030—Without Switch. Price.....$6.00
Stock No. 3031—With Switch. Price..... 8.05
Prices do not include lamps.

HUBBARD H. ERICKSON & CO. 3037 N. Western Ave., Chicago, Ill.

ERICO Marine Specialties

Fancy Wood Steering Wheels

Our wheels are made of selected genuine mahogany, fastened throughout with brass screws capped with plugs, and fitted with two part polished bronze hubs which allows taking up play in spokes caused by shrinkage.

(Diameter is measured from tip to tip of spokes.)

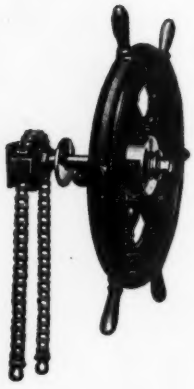
Diameter of Wheel	No. of Spikes	Bored for Shaft	Size Keyway	Stock No.	Price
20 in.	6	1 in.	¼ in.	1306	$30.00
24 in.	6	1⅛ in.	¼ in.	1307	35.00
30 in.	6	1⅛ in.	¼ in.	1309	45.00
36 in.	8	1¼ in.	¼ in.	1310	60.00
42 in.	8	1¼ in.	5/16 in.	1311	70.00
48 in.	8	1¼ in.	5/16 in.	1312	90.00

Wheels with two white holly ribbons inlaid on forward side, $6.00 additional.

AFTER USING A NUMBER OF ERICO SHAFT LOGS IN RACING BOATS AND OTHERWISE, I HAVE DECIDED TO ADOPT THEM ALTOGETHER AND ALSO SPECIFY SAME IN ALL OF MY WORK.

I HAVE FOUND FROM PAST EXPERIENCE THAT IT SEEMS NECESSARY IN A GREAT MANY CASES TO RE-ALIGN THE SHAFT AFTER SAME IS USED A SHORT TIME. WITH THE UNIVERSAL ACTION IN YOUR SHAFT LOG THIS IS ENTIRELY ELIMINATED AND FOR THAT REASON I CONSIDER THE ERICO SHAFT LOG THE BEST ONE TO BE HAD IN THE MARKET.

John G. Hacker



Erico Cruiser Type Chain Steerer

The most desirable type of steering gear for power cruisers and yachts; and adds materially to the appearance of your boat. Heavy roller link brass chain operating over bronze gear; all mounted on 1⅜" bronze shaft, 10 inches long. These steerers are furnished with fancy mahogany spoke steering wheels, all natural finished, and fitted with two-part bronze hubs, highly polished.

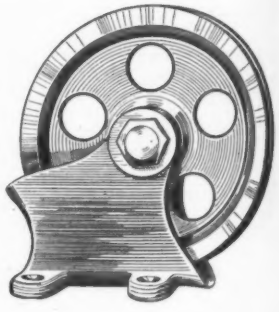
Stock Number	Diameter of Wheel	No. of Spokes	Weight	Price
1330	20 in.	6	15	$70.00
1331	24 in.	6	19	80.00
1332	30 in.	6	22	95.00
1333	36 in.	8	28	110.00

Wheels with two white holly ribbons inlaid on forward side, $6.00 additional.

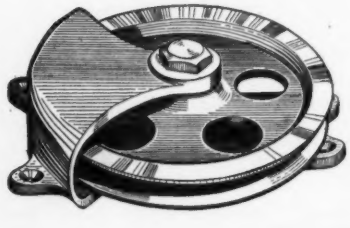
Upright Wire-Rope Pulley or Quarter Block

PLAIN BRONZE

Produced to meet the demand for a stronger, better designed pulley of this character. Very substantially made.



Diameter of Sheave	For Diameter of Cable	Dimensions Base	Height	Stock No.	Price
6 in.	⅜ in.	6½x3½ in.	7½ in.	1421	$7.00
8 in.	½ in.	5 x4 in.	9 in.	1422	12.00



Flat Wire-Rope Pulley or Quarter Block

PLAIN BRONZE

Meets the demand for a stronger, better designed pulley of this character. Very substantial construction.

Diameter of Sheave	For Diameter of Cable	Dimensions Over All	Stock No.	Price
6 in.	⅜ in.	8½x7½ in.	1423	$7.00
8 in.	½ in.	10½x8 in.	1424	12.00

HUBBARD H. ERICKSON & CO. 3037 N. Western Ave., Chicago, Ill.

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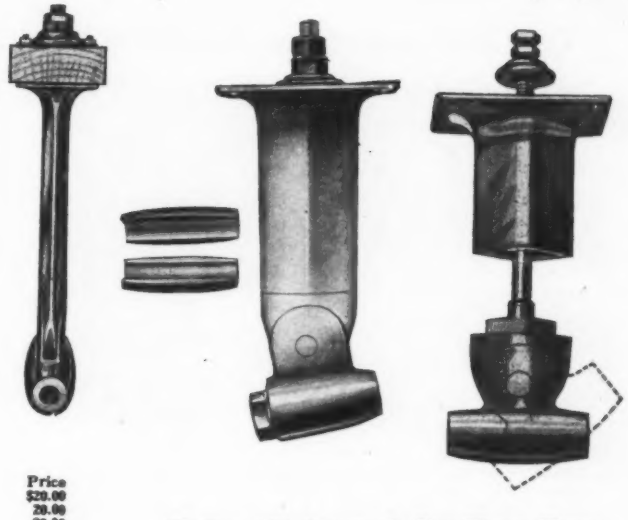
ERICO Marine Specialties

Erico Universal Strut
IMPROVED TYPE

Erico Improved Type Universal Strut has many advantages. Fitted with two-piece babbitt bearing, which can be replaced without removing strut or shaft. These bearings set in strut, which is tapered on the inside and then drawn up by a tapered sleeve, which screws in from the aft end. This strut meets the demand also for a stock fitting, as it eliminates the delay and expense of designing a special strut and making patterns. The proper height of strut is obtained by sawing off the upper casting to suit. Stock strut measures 12" from base to center line of shaft bearing. The bearing itself is self-aligning as to angle. Made entirely of cast bronze and streamline designed. The main casting being hollow is lighter than the average strut and is more substantial.



Bored for Shaft	Dimensions of Base	Weight	Stock No.	Price
¾ in.	7x3½ in.	11½ lbs.	7001	$20.00
⅞ in.	7x3½ in.	11½ lbs.	7002	20.00
1 in.	7x3½ in.	11½ lbs.	7003	20.00
1⅛ in.	7x3½ in.	11½ lbs.	7004	20.00
1¼ in.	7x3½ in.	11½ lbs.	7005	20.00
1⅜ in.	7x3½ in.	12½ lbs.	7006	24.00
1½ in.	7x3½ in.	12½ lbs.	7007	24.00

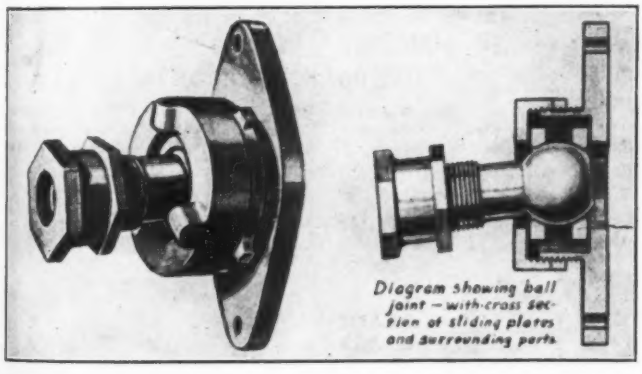


Diagram showing ball joint — with cross section at sliding plates and surrounding parts

Erico Universal Stuffing Box and Shaft Log
IMPROVED TYPE
(Cummins Patents, U. S. and Canada)

When this fitting is bolted in place in merely approximate alignment, perfect alignment of shaft bearing is readily adjusted without disturbing fastening surface. The feature which makes this possible is a ball joint in sliding plates, permitting not only change of angle of shaft bearing to fastening surface but also the movement of the point of bearing itself in any direction, up or down, right or left. Both this radial and lateral action are securely locked by a single cap nut.

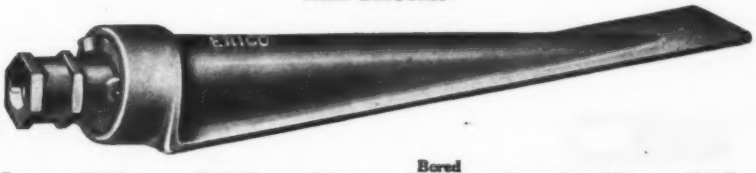
As will be seen, this not only simplifies the initial installation but makes possible the easy readjustment to perfect alignment which becomes necessary from time to time through change in the relative positions of the parts of a boat through sag or strain.

Made entirely of best bronze bearing metal.

Bored for Shaft	Dimensions of Base	Weight	Stock No.	Price
⅝ in.	4½x2⅝ in.	2¼ lbs.	4571	$6.97
¾ in.	4½x2⅝ in.	2 lbs.	4572	6.97
⅞ in.	5½x2⅝ in.	3 lbs.	4573	9.14
1 in.	5½x2⅝ in.	2⅝ lbs.	4574	9.14
1⅛ in.	6 x3⅛ in.	5½ lbs.	4575	13.27
1¼ in.	6 x3⅛ in.	5⅛ lbs.	4576	13.27

Bored for Shaft	Dimensions of Base	Weight	Stock No.	Price
1⅜ in.	6¾x4⅛ in.	8¼ lbs.	4577	$19.78
1½ in.	6¾x4⅛ in.	8 lbs.	4578	19.78
1⅝ in.	7½x5 in.	15½ lbs.	4579	36.60
1¾ in.	7½x5 in.	15 lbs.	4580	36.60
2 in.	9½x5⅝ in.	22 lbs.	4581	43.25
	9½x5⅝ in.	21¾ lbs.	4582	43.25

Erico Universal Shaft Log
ALL BRONZE



Bored for Shaft	Dimensions of Base	Weight	Stock No.	Price
⅞ in.	17½x3¼ in.	11 lbs.	4583	$18.00
¾ in.	17½x3¼ in.	11 lbs.	4584	18.00
⅞ in.	17½x3¼ in.	11 lbs.	4585	18.00
1 in.	17½x3¼ in.	11 lbs.	4586	18.00
1⅛ in.	23¼x3½ in.	14 lbs.	4587	29.00
1¼ in.	23¼x3½ in.	14 lbs.	4588	29.00

Bored for Shaft	Dimensions of Base	Weight	Stock No.	Price
1⅜ in.	25½x3¾ in.	17 lbs.	4589	$36.00
1½ in.	25½x3½ in.	17 lbs.	4590	36.00
1⅝ in.	33½x4¾ in.	30 lbs.	4591	52.00
1¾ in.	33½x4¾ in.	30 lbs.	4592	52.00
2 in.	33½x4½ in.	34 lbs.	4593	80.00
	33½x4½ in.	34 lbs.	4594	80.00

HUBBARD H. ERICKSON & CO. 3037 N. Western Ave., Chicago, Ill.

ERICO Marine Specialties

Cast Aluminum Cowl Ventilator

OVAL MOUTH

With Bronze Ring, Deck Plate and Cover

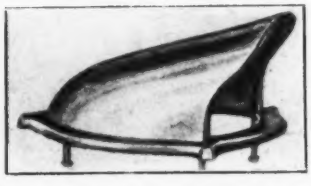
All Polished

A light but substantial ventilator. The polished aluminum hood with its polished bronze ring and deck plate give a pleasing effect.

Prices include key for deckplate cover.

Diam. at Deck Plate	Dimensions of Mouth	Height Over All	Weight	Stock No.	Price
3 in.	6¾x4¾ in.	9 in.	3¼ lbs.	1601	$11.00
4 in.	7¼x5½ in.	10½ in.	4¼ lbs.	1602	14.00
5 in.	9 x6¾ in.	12 in.	7½ lbs.	1603	18.00

Clam-Shell Ventilator



Used on speed boats in place of cowl ventilator, also as exhausting ventilator by reversing.

Width of Opening	Extreme Height	Dimensions of Base	Polished Bronze Weight	Stock No.	Price
4 in.	2½ in.	5½x5¼ in.	1½ lbs.	1608	$3.00
5¼ in.	3 in.	6¾x7½ in.	2½ lbs.	1609	4.50

Fender Hook

A neat, unobstrusive fitting for attaching fenders.

Size Base	Weight	Polished Bronze Stock No.	Price
2x1⅜ in.	2½ oz.	1914	$0.60

JOHN G. ALDEN
YACHT BROKER AND NAVAL ARCHITECT
148 STATE STREET, ROOM 615
TELEPHONE RICHMOND 2318
BOSTON MASS

I THINK I KNOW A GOOD THING WHEN I SEE IT. THAT IS WHY I HAVE USED YOUR FIXTURES ON SO MANY BOATS THIS LAST YEAR. NOT ONLY ARE THEY THE BEST AVAILABLE, BUT THE ACCURACY AND PROMPTNESS WITH WHICH MY ORDERS HAVE BEEN FILLED HAS BEEN VERY PLEASING.

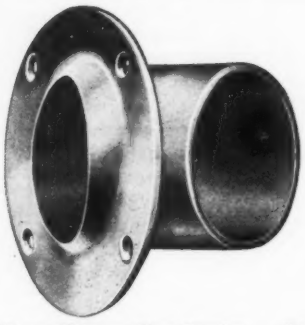
John G. Alden

Tiller Rope Clamps

PLAIN BRASS

Rope Diameter	Length	Width	Stock No.	Price
⅛ in.	1-3/16 in.	11/16 in.	6061	$0.40
3/16 in.	1⅝ in.	⅞ in.	6062	.45
¼ in.	1-13/16 in.	1 in.	6063	.50
5/16 in.	2-1/16 in.	1⅛ in.	6064	.60
⅜ in.	2¼ in.	1¼ in.	6065	.75

Engine Compartment Outlet Ventilator



For use on runabouts where ventilation outlets are desired through the hull, instead of on deck or on the hatch covers.

Made of cast bronze, with exposed surface highly polished, and interior finished in red enamel.

Diam. of Flange	Diam. Opening	Weight	Stock No.	Price
4 in.	2⅛ in.	18 oz.	6050	$2.50

Tank Cap and Flange

POLISHED BRONZE

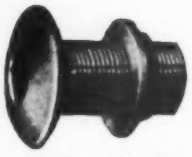
Size Pipe	Width Over All	Diam. Flange	Weight Per Set	Stock No.	Price Per Set
1½ in.	6½ in	3¾ in.	1¼ lbs.	6040	$3.00

High Speed Intake Strainer

PLAIN BRASS

Stock No.	Size Pipe	Price	Stock No.	Size Pipe	Price
6020	½	$1.10	6023	1¼	$2.40
6021	¾	1.50	6024	1½	3.10
6022	1	2.15	6025	2	3.70

Intake and Exhaust Pipe Connections



PLAIN BRASS

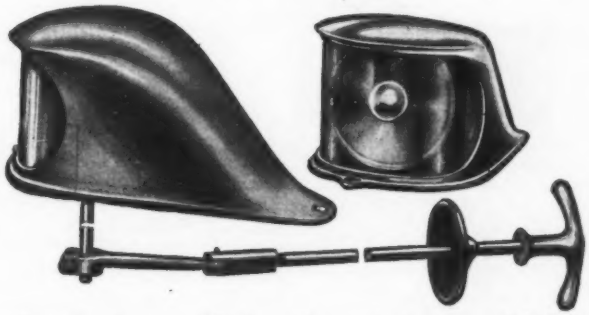
Stock No.	Size Pipe	Price	Stock No.	Size Pipe	Price
6011	½	$0.70	6015	1½	$2.55
6012	¾	.85	6016	2	3.20
6013	1	1.20	6017	2½	5.45
6014	1¼	1.70	6018	3	6.60

HUBBARD H. ERICKSON & CO. 3037 N. Western Ave., Chicago, Ill.

Advertising Index will be found on page 384

ERICO Marine Specialties

ERICO Streamline Runabout Searchlight



An attractive and efficient searchlight, yet not obstructive, which is placed on the deck at the bow with bulkhead control, which operates the direction of the beam. The reflector, being set in bearings inside of the casting, revolves, and is controlled by a push and pull handle at the dash. Really a necessity where night running is done. Made of cast bronze highly polished.

IT IS NECESSARY FOR THE BOAT BUILDER TO BE EXCEEDINGLY CAREFUL IN THE FITTINGS THAT HE SUPPLIES AND BY SELECTING WHERE POSSIBLE YOUR PRODUCT WE FEEL PERFECTLY SATISFIED THAT OUR CUSTOMERS WILL HAVE NO FAULT TO FIND IN THE SERVICE GIVEN.
WE WISH TO COMPLIMENT YOU ON THE EXTREMELY FINE LINE WHICH YOU HANDLE AND THE VERY PROMPT AND COURTEOUS ATTENTION YOU HAVE ALWAYS GIVEN OUR ORDERS.

President.

Dimensions of Base	Height from Deck	Diameter Reflector	Weight	Stock No.	Price
9x4¾ in.	4 in.	3¾ in.	4 lbs.	910	$30.00

ERICO Electric Searchlights

NEW TYPE

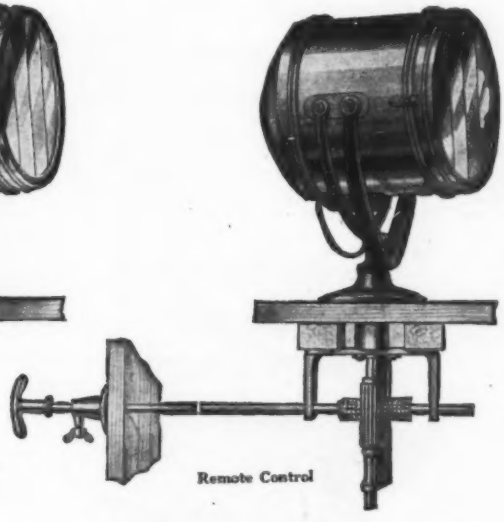
Real marine searchlights, of new improved type, giving maximum of power possible for size of reflectors. These new searchlights combine the use of special Bausch and Lomb Parabolic Glass Reflectors, with Nitrogen incandescent lamps, and they produce the most powerful, brilliant white beam light. Readily adjusted for narrow or wide beam.

The construction is of the most substantial and durable character. Barrels of heavy 18 gauge brass with heavy reinforcing beads at each end. All other parts except body are cast bronze.

Erico Electric Searchlights are fully guaranteed to give entire satisfaction, or they may be returned within 30 days and full cost will be refunded.

Cabin Control

Deck Control



Remote Control

Furnished with medium screw base Nitrogen lamps as follows: 6 and 12 volts, 108 watts; 24, 32 and 110 volts, 200 watt.

Stock Number	Type	Diameter Barrel	Length Barrel	Height from Deck	Lens	Stock Finish	Weight	Price
799	Deck Control	8¾ in.	9 in.	14 in.	Plain	Polished	10 lb.	$55.00
800	Cabin Control	8¾ in.	9 in.	13 in.	Plain	Polished	14 lb.	60.00
801	Remote Control	8¾ in.	9 in.	13 in.	Plain	Polished	20 lb.	80.00
900	Deck Control	11 in.	14 in.	16½ in.	Sectional	Gray Enamel	18 lb.	90.00
901	Cabin Control	11 in.	14 in.	15¼ in.	Sectional	Gray Enamel	22 lb.	95.00
902	Remote Control	11 in.	14 in.	15¼ in.	Sectional	Gray Enamel	29 lb.	115.00

HUBBARD H. ERICKSON & CO. 3037 N. Western Ave., Chicago, Ill.

ERICO Marine Specialties

Combination Bow Plate

This fitting serves as a finishing plate and bow chock on small runabouts. For rope up to 1" diameter.

Length	Width	Weight	Polished Bronze Stock No.	Price
4¼ in.	5 in.	1¼ lb.	1915	$3.50

WE ARE VERY PLEASED TO ADVISE THAT CERTAIN OF YOUR PRODUCTS WHICH ARE USED IN CONNECTION WITH OUR NEW THIRTY-SIX FOOT "SEAVILLA" CRUISER HAVE PROVEN MOST SATISFACTORY. THIS, OF COURSE, IS ALSO TRUE OF SUCH PRODUCTS AS YOUR ADJUSTABLE SHAFT LOG AND OTHER ITEMS USED ON THE WELL KNOWN GREAT LAKES FIFTY FOUR FOOT CRUISER.

YOUR SPLENDID SERVICE HAS BEEN GREATLY APPRECIATED, AND YOU MAY BE SURE THAT THE ERICO PRODUCTS WILL CONTINUE TO BE ASSOCIATED NOT ONLY WITH OUR GREAT LAKES THIRTY-SIX FOOT "SEAVILLA" CRUISER, BUT OTHER OF OUR BOATS AS WELL.

GREAT LAKES BOAT BUILDING CORPORATION

by

Mooring Bitt With Flagstaff Socket

Used on small runabouts and tenders. Socket is straight for bok flagstaff.

Polished Bronze Dimensions of base	Extreme height	Weight	Stock No.	Price
4¼x4¼ in.	3½ in.	2½ lbs.	1913	$4.50

Bulwark Chock

POLISHED BRONZE

Width	Height	Length	Weight	Stock No.	Price ea.
1¼ in.	2½ in.	5½ in.	2 lbs.	1950	$2.50
1½ in.	2¾ in.	6½ in.	3 lbs.	1951	4.50
2 in.	3 in.	7½ in.	4¼ lbs.	1952	6.00
2½ in.	3¾ in.	10 in.	7 lbs.	1953	8.00

Regular Deck Plate

POLISHED BRONZE

Diameter Opening	Diameter Flange	Weight	Stock Number	Price each
3 in.	4⅞ in.	1½ lbs.	1940	$1.80
4 in.	6 in.	1¾ lbs.	1941	2.50
5 in.	7⅛ in.	3 lbs.	1942	4.50
6 in.	8¼ in.	4½ lbs.	1943	5.20

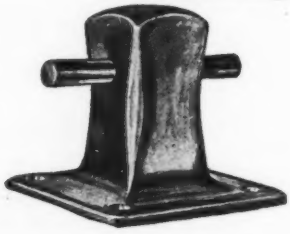
Erico Rope End and Deck Pipe

A handy fitting where dock lines are carried below deck. The lower end of rope being fastened to the stem and the other end in the brass cap as illustrated. Suitable for runabouts.

POLISHED BRONZE

Diameter Flange	Height above Deck	Weight	Stock Number	Price
2½ in.	1½ in.	¾ lb.	1980	$2.50

Mooring Bitt



The highly polished cast bronze fitting, in addition to its usefulness, has an ornate quality which will add to the appearance of any boat.

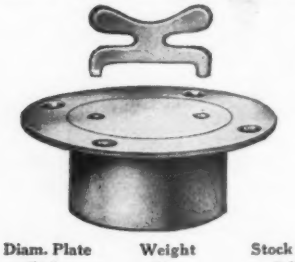
Dimensions of base	Extreme Height	Weight	Polished Bronze Stock No.	Price
4¼x4¼ in.	3½ in.	2½ lbs.	1908	$4.20
6 x6 in.	5 in.	7 lbs.	1909	8.00
7 x7 in.	6½ in.	8½ lbs.	1910	12.00
9 x9 in.	8½ in.	17½ lbs.	1911	18.00

Streamline Double Head Chocks

POLISHED BRONZE

Length Base	Weight	Stock No.	Price ea.
6 in.	2 lbs.	1960	$2.00
7½ in.	2¾ lbs.	1961	3.00
9 in.	3⅝ lbs.	1962	4.00

Iron Pipe Size Deck Plate



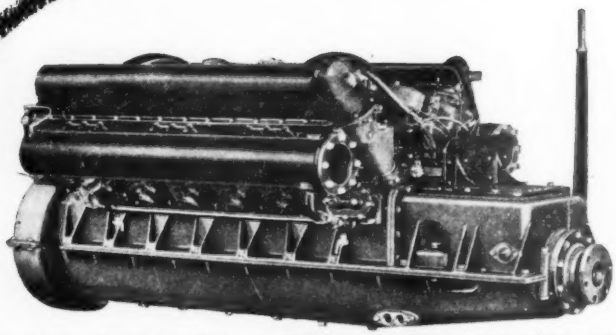
POLISHED BRONZE

Pipe Size	Diam. Plate	Weight	Stock No.	Price
¾ in.	2½ in.	11 oz.	1930	$0.70
1 in.	2¾ in.	14 oz.	1931	.80
1¼ in.	3½ in.	17 oz.	1932	1.10
1½ in.	3⅝ in.	18 oz.	1933	1.30
2 in.	4⅛ in.	2 lbs.	1934	1.70

HUBBARD H. ERICKSON & CO. 3037 N. Western Ave., Chicago, Ill.

Advertising Index will be found on page 384

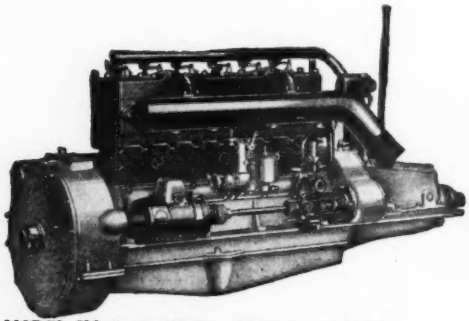
W. & J.
TIEBOUT
MARINE HARDWARE
MOTOR
BOAT
SHOW
STANDARD
For All Types
of Craft
TIEBOUT Hardware and Equipment is not only displayed at our Booth, Nos. 18, 19, 20 but is shown in actual use in many of the boats at the Show.
Boat builders find Tiebout Hardware of great value in producing standard craft of high quality at reasonable prices.
W. & J. Tiebout
118 Chambers Street
New York



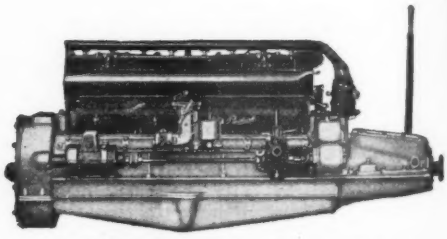
MODEL IM-1242—Sweepstakes Type. 12 Cylinders. 500 H.P. at 2500 R.P.M. Weight 1140 lbs. Designed originally for the Sweepstakes race. Winner of first and second places in the 1925 Sweepstakes. Famous all over the world for its wonderful showing, the two entries holding first and second places throughout the entire 150 mile grind without any mechanical trouble.

For high class runabouts, racing boats and hydroplanes, it is, without doubt, the finest engine on the market. Develops speed up to 65 miles per hour. Can be used either with a direct drive propeller or through a gear box. The ideal engine where maximum power requirements are desired with compactness and light weight.

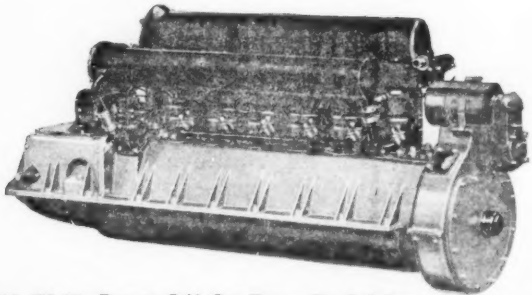
Furnished with ignition, starting and light switch; battery of electric gasoline pumps: electric starter; ammeter; oil gauge; oil tank and cooler; tool kit; propeller shaft coupling; battery and hand starting bar. Price $12,000.00.



MODEL IM-268—6-cylinder. Develops 45 H.P. at 1800 R.P.M. Weighs 625 lbs. Specially designed for runabouts up to 26 feet in length. Also suitable for small cruisers and auxiliaries. Furnished in right and left hand rotation for twin screw installation. Price $1500.00.



MODEL IM-357—8-cylinder. Develops 60 H.P. at 1800 R.P.M. Weighs 790 lbs. Ideal for runabouts up to 35 feet and for cruisers and auxiliaries. Furnished in right and left hand rotation for twin screw installation. Price $2000.00.



MODEL IM-621—Famous Gold Cup Type. Six Cylinders. 260 H.P. at 2500 R.P.M. Weight 900 lbs. Three times winner of the Gold Cup Speed boat races, and without a doubt the finest engine in the motor boat field.
So compact that it is the finest installation possible in runabouts of 25 to 40 feet, with speed range up to 50 miles an hour. No mechanical complication, all moving parts easily accessible and built of finest materials obtainable.
Furnished with ignition, starting and lighting switch; battery of electric gasoline pumps; electric starter; ammeter; oil gauge; oil tank and cooler; tool kit; propeller shaft coupling; battery and hand starting bar. Price $6000.00.

Advertising Index will be found on page 384

Packard Increases Marine Engine Activity for 1926

DURING 1925 Packard Marine Engines set many new records in the displacement field of motor boating. Their power, speed and dependability were repeatedly demonstrated—in races, and on work boats and pleasure craft.

First and second places in the Gold Cup Races, first and second places in the 150 mile Y. A. A. Sweepstakes, not a Packard powered craft forced out of either event on account of engine trouble—these are but a few of the outstanding achievements for the year.

Other new records for dependability under all conditions —equally noteworthy if less spectacular—were established in the hands of satisfied owners everywhere in the United States.

Packard's plans for 1926 call for a continuance of the same dependable line of marine engines—with greater production and largely increased activity. A complete description of any model will gladly be furnished upon request.

DEALERS:—Boat builders and marine engine dealers are invited to write for complete information on the Packard line, including trade discounts.

PACKARD MOTOR CAR CO.
DETROIT, MICHIGAN

PACKARD MARINE ENGINES

ASK THE MAN WHO OWNS ONE

America's Leading Marine Engine Builders

(*Continued from page* 194)

Maybach Motor Company
253 West 57th Street, New York City — **MAYBACH ZEPPELIN**

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Starting device	Ignition system	Spark plugs	Carburetor
S-1	65	3¼x5⅞	6	4	1800 Motor	1200	Force feed...	German Bosch..	Ger. Bosch..	Ger. Bosch..	Own
S-2	70	3¼x5⅞	6	4	1800-2000	1150	Force feed...	(Reversible	Ger. Bosch..	Ger. Bosch..	Own
VL-1	450	5½x7¼	12	4	1400	2250	Force feed...	compr. air)			
Diesel G-4	150	5 x7	6	4	1300	2650	Force feed...	Compr. air.....	None	None	Inject valves

Mianus Sales Corporation
GASOLINE & DIESEL — **165 Broadway, New York City** — **MIANUS**

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse Gear	Starting device	Ignition system	Spark plugs	Carburetor
A	3	4 x4	1	2	550	175	.....	.....	Hand ...	Make & Break	.....	Schebler
A	5	4¼x5	1	2	500	280	.....	.....	Hand ...	Make & Break	.....	Schebler
A	7½	5-9/16x6	1	2	450	415	.....	.....	Hand ...	Make & Break	.....	Schebler
A-2	6	4 x4	2	2	550	300	.....	.....	Hand ...	Make & Break	.....	Schebler
A-2	10	4¼x5	2	2	500	500	.....	.....	Hand ...	Make & Break	.....	Schebler
A-2	15	5-9/16x6	2	2	450	750	.....	.....	Hand ...	Make & Break	.....	Schebler
44	25-40	4 x5	4	4	850-1400	950	Force feed...	Paragon B Special	Hand ...	Eisemann H-F Magneto....	Bethlehem...	Schebler
N	7½	5-5/16x7⅛	1	2	550	1570	Mechanical..	Joes	Air	Compression ..	.....	.....
N	15	5-5/16x7⅛	2	2	550	1775	Mechanical..	Joes	Air	Compression ..	.....	.....
N	22	5-5/16x7⅛	3	2	550	2760	Mechanical..	Joes	Air	Compression ..	.....	.....
P	18	7¼x9⅞	1	2	400	3200	Mechanical..	Joes	Air	Compression ..	.....	.....
P	35	7¼x9⅞	2	2	400	4665	Mechanical..	Joes	Air	Compression ..	.....	.....
P	50	7¼x9⅞	3	2	400	6055	Mechanical..	Joes	Air	Compression ..	.....	.....
P	70	7¼x9⅞	4	2	400	7440	Mechanical..	Joes	Air	Compression ..	.....	.....
P	100	7¼x9⅞	6	2	400	11500	Mechanical..	Joes	Air	Compression ..	.....	.....
D-R	100	7¼x9⅞	6	2	400	11000	Mechanical..	Direct Reversible ..	Air	Compression ..	.....	.....

Millers Motor Corporation
2329-2331 North Talman Avenue, Chicago, Ill. — **MILLER**

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
F-1	4	4½x5	1	4	600	400	Drip and splash..	Own.....	Crank.....	Optional....	Champion...	Schebler
I-1	6	5¼x6	1	4	500	500	Drip and splash..	Own.....	Crank.....	Optional....	Champion...	Schebler
F-2	10	4½x6	2	4	600	600	Pump	Own.....	Crank.....	Optional....	Champion...	Schebler
I-2	14	5¼x6½	2	4	500	750	Pump	Own.....	Crank.....	Optional....	Champion...	Schebler
D-4	14	2¾x4	4	4	1500	350	Pump	Own.....	Crank or electric..	Bosch	Champion...	Schebler
E-4	20	3½x5	4	4	1000	650	Pump	Own.....	Crank or electric..	Bosch	Champion...	Schebler
E-6	35	3½x5	6	4	1250	850	Pump	Own.....	Crank or electric..	Bosch	Champion...	Schebler
F-4	22	4½x6	4	4	800	1200	Pump	Own.....	Crank or electric..	Bosch	Champion...	Schebler
I-4	30	5¼x6	4	4	700	1500	Pump	Own.....	Crank or electric..	Bosch	Champion...	Schebler
R-4	35	5¼x7½	4	4	550	1900	Pump	Own.....	Crank or electric..	Bosch	Champion...	Schebler
S-4	50	6 x9	4	4	450	2700	Pump	Own.....	Crank or electric..	Bosch	Champion...	Schebler

The New London Ship & Engine Co.
DIESEL (Marine) — **Groton, Conn.** — **NLSECO**

Model		Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Operating Cycle
120V4FS	Direct Reversible.....	120	9 x12¾	4	4	350	18100	Forced feed.....	Air injection
180V6FS	Direct Reversible.....	180	9 x12½	6	4	350	20500	Forced feed.....	Air injection
240V8FS	Direct Reversible.....	240	13 x18	8	4	350	30700	Forced feed.....	Air injection
220V4FS	Direct Reversible.....	220	13 x18	4	4	240	41000	Forced feed.....	Air injection
330V6FS	Direct Reversible.....	330	13 x18	6	4	240	55200	Forced feed.....	Air injection
440V8FS	Direct Reversible.....	440	13 x18	8	4	240	75500	Forced feed.....	Air injection
6GV24	Direct Reversible.....	600	16½x24	6	4	205	120000	Forced feed.....	Air injection
6MI15	Direct Reversible.....	200	10½x15	6	4	300	15500	Forced feed.....	Mechanical injection
6MI18	Direct Reversible.....	300	12 x18	6	4	260	47140	Forced feed.....	Mechanical injection
6MI22	Direct Reversible.....	450	14½x22	6	4	225	67500	Forced feed.....	Mechanical injection

New Jersey Motors, Inc.
Keyport, N. J. — **N. J. M.**

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plug	Carburetor
7	15	3¼x4	4	4	950	500	Force feed gear pump and splash	Joe's	NJM pat. Rear hand or Electric	Atwater Kent Type H or Robt. Bosch ZU4 magneto	Rajah	Schebler
8	20	3¼x4	4	4	1450	550	Force feed gear pump and splash	Joe's	NJM pat. Rear hand or Electric	Ignition system Atwater Kent Type H or Robt. Bosch ZU4 magneto	Rajah	Schebler

New York Yacht, Launch & Engine Co.
Morris Heights, New York, N. Y. — **20TH CENTURY**

Horse power	Bore and stroke	No. of cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
60	6½x8½	4	4	400	3400	Force.....	Own.....	Electric.....	Bosch.....	Stitt.....	Stromberg
100	6½x8½	6	4	400	4500	Force.....	Own.....	Electric.....	Bosch.....	Stitt.....	Stromberg

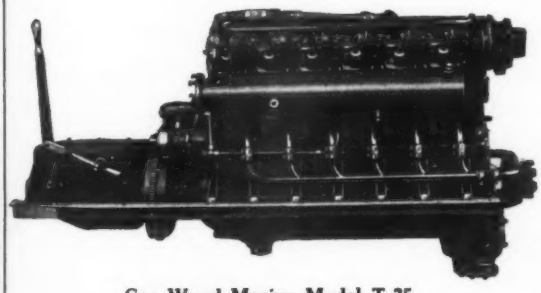
Niagara Motors Corporation
Dunkirk, N. Y. — **NIAGARA**

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
G	5	3¼x4	1	4	700-1000	160	Force.....	Joe's.....	.....	Bosch.....	Champion....	Zenith
Special	15	2¾x4	4	4	900-1500	325	Force.....	Joe's.....	.....	Bosch.....	Champion....	Zenith
E-2	14	4¼x5½	2	4	700-1000	450	Force.....	Own	.....	Bosch.....	Champion....	Wheeler-Schebler
E-4	35	4¾x5½	4	4	700-1000	725	Force.....	Own	.....	Bosch.....	Champion....	Wheeler-Schebler
D-4	80	6¼x7	4	4	700-1000	1075	Force.....	Own	.....	Bosch.....	Champion....	Wheeler-Schebler
D-6	120	6¼x7	6	4	700-1000	1550	Force.....	Own	Leece-Neville..	Bosch.....	Champion....	Wheeler-Schebler

(*Continued on page* 254)

Again Gar Wood Marine Engine Sets a New World Record

THE record-breaking twenty-four hour run of Commodore Greening's speed boat, the Rainbow IV, proves once more the unending reliability and durability of the Gar Wood-Marine Engine. The Rainbow IV covered 1218 miles in twenty-four hours at an average speed of more than 50 miles an hour. This run was made under the observation of the American Power Boat Association. All previous speed records in races from 150 miles and up were beaten. What better proof could be wanted of engine dependability than this? Every day in service on hundreds of express cruisers and fast runabouts, the Gar Wood-Marine Engine is proving its superiority just as effectively as it did in this twenty-four hour run.



Gar Wood-Marine Model T-25
400 H. P. at 1700 R. P. M.
Price $5,000.00 F. O. B. Factory

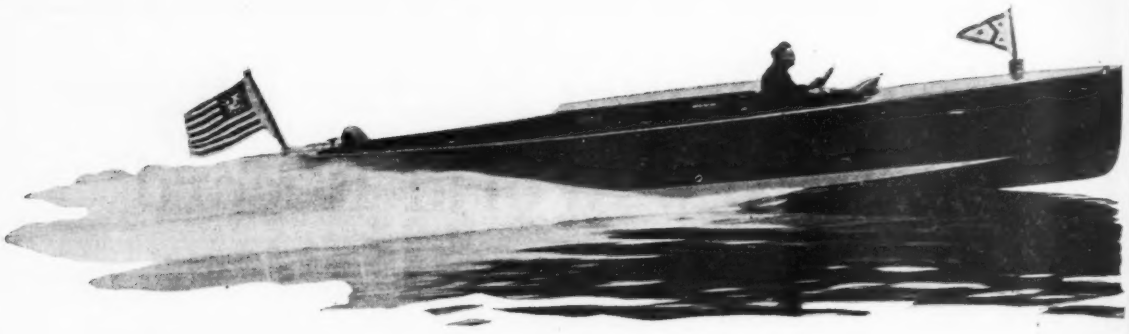
SPECIFICATIONS
12 Cylinders, V-Type; 5" bore, 7" stroke. Overall length, 83½"; width, 36"; height, 43½". Weight, 1450 lbs.

The Gar Wood-Marine Engine is the choice of yachtsmen who want not only the utmost speed, but who demand consistent reliability under gruelling conditions. The many world records broken by the Gar Wood-Marine Engine, has made it the preferred power plant for fast cruisers, runabouts and speed boats. Single, twin, triple screw and installations up to five engines per boat, in runabouts and cruisers up to 72 ft. in length, show the possibilities for dependable fast boats in all sizes of craft.

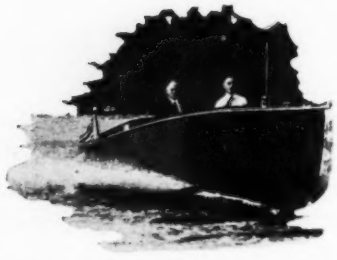
GAR WOOD, Incorporated

Builder of Gar Wood Marine Engines, Baby Gar Runabouts and Gar Jr. Cruisers

409 Connecticut Ave. Phone, Arlington 1920 Detroit, Mich.



The New 26 Foot Albany Runabout Is Now Powered with The Kermath Four and Six



26'x6½' Albany Runabout powered with 4-cylinder Kermath 70-H.P. motor; speed 23 miles an hour.

26'x6½' Stock Model Runabout with 6-cylinder 100-H.P. Kermath motor; speed 28 miles an hour.

KERMATH
EQUIPPED

F. O. B. Factory
with 6 cylinder $4000
with 4 cylinder $3500

In announcing the famous 26 foot Albany all mahogany runabout as standard equipped with the Kermath 6 cylinder 100 horse power marine motor, we do so with the certainty that all other motor possibilities have been exhausted by comparison. Kermath motors, we have found, offer greater speeds coupled with the much desired reliability that precludes the petty annoyances resulting from minor motor troubles.

The Kermath is a fitting engine for a fine boat. In the past Albany has prided itself on the high quality of its workmanship and the choice materials used in the construction of their craft.

This standard is reflected in the reputation its standardized runabout enjoys with its many owners. The in-built qualities of sound construction and perfect design in Albany boats have long been factors that seriously recommend themselves to those who contemplate owning a smart serviceable runabout.

ALBANY BOAT CORPORATION

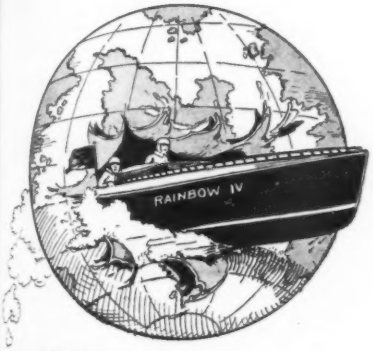
WATERVLIET

NEW YORK

Advertising Index will be found on page 384

What Do You Know About Your Engine Oil?

DUPLEX MARINE ENGINE OIL



Holder of the WORLD'S RECORD

When Commodore H. B. Greening set out to break the world's 24 hour record with Rainbow IV on Muskoka lakes last October, he *knew* he had the right oil in his crankcase.

Commodore Greening knew his oil was right because he had asked Gar Wood what oil to use and Gar Wood told him to run on *Duplex Marine Engine Oil*. He knew he had the right oil as hour after hour passed by, while he held to an average running speed of more than 53 miles per hour, and his oil pressure gauge held steady. He knew his oil was right when tests at the end of the race (when he had set up a new mark of 1218 miles for 24 hours) showed that the viscosity (body) of the oil had held up throughout the run, while the dilution was only *4/10ths of one per cent.*

Duplex Marine Engine Oil is writing a new chapter in motor boat performance because it is made for the exacting requirements of marine service and is *not* an automobile oil. It is made from 100% Pure Pennsylvania crude—the source of the world's finest lubricants—and produced by the makers of Duplex Motor Oil, used by Pierce-Arrow owners for more than twenty-five years.

You will be glad to have the full story of Duplex Marine Engine Oil—write for it today.

Stop That Water Pump Leak With KASSON Waterproof Grease

Stop tinkering with a leaky water pump, when the fault is not with the pump but with the grease. Feed the pump shaft bearings with Kasson—the only waterproof grease ever made—and you will have a lubricant that will stop the leaks, because it sticks to the bearings no matter how much water flows past them.

As Kasson will not mix with water, it is not carried with the water stream to coat and clog the water jackets, which is always happening when ordinary greases are used on the water pump. And it's just as essential for stuffing boxes, stern bearings, bilge pumps or submerged gears.

Send For Free Trial-Size Can

Write us your name and address, including the name and address of your marine supply dealer, and we will send you a trial-size can large enough to prove how quickly Kasson stops the leaky pump habit.

Distributors and Dealers—Write today for the introductory proposition on Kasson Waterproof Grease.

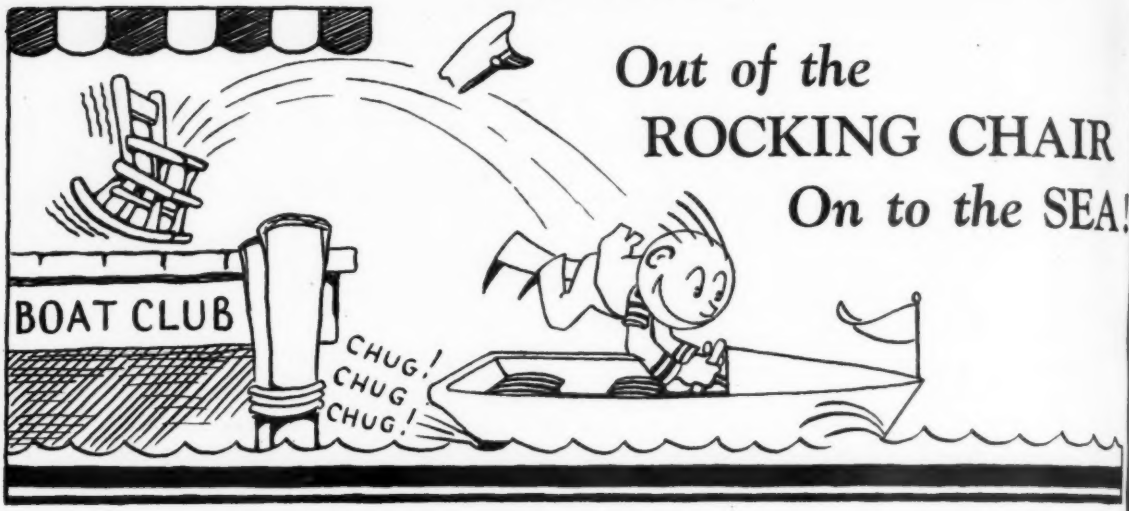
Guaranteed 100% PURE PENNSYLVANIA OIL

ENTERPRISE OIL CO., INC.

Established 1884

162 Chandler Street **Buffalo, N. Y.**

Exhibitors at the Motor Boat Show



Out of the ROCKING CHAIR *On to the* SEA!

PITY the rocking chair admiral! Resplendent in yachtsman's cap and uniform, he sits all day on the clubhouse porch, rocking to and fro . . . to and fro. His friends—gay sea-dogs all—are out on the rolling sea, tripping hither and yon; rounding the buoys; riding at anchor, with hook and line awaiting a denizen of the deep. But there *he* sits, rocking . . . to and fro.

And why is he chained to the chair? Because, poor soul, he's afraid he'll get sea-sick!

But now—hark ye, admirals all!—comes SEOXYL. And presto—the rocking chair admiral becomes a sea-dog, too; fit to go forth in trusty boat and battle with whistling wind and foam-flecked billow. With SEOXYL in his emergency kit—and under his belt—he can laugh at the bounding main!

Read What "Motor Boating" Said in October Issue:

" . . . There is no more reason why this (sea-sickness) should occur, since a remedy is available. . . . During the recent Gold Cup Regatta, where the boats were anchored for long periods and were subjected to a continuous slight roll, a condition which affects many people more than the motion while under way, SEOXYL used by numerous visitors to the races succeeded in banishing all traces of discomfort and permitted undisturbed attention to the regatta . . . "

(*Motor Boating, Oct., 1925, page 46*)

Carry SEOXYL on board—always! With SEOXYL in the emergency kit you, your family and friends can bid good-bye to the sinister dread of sea-sickness!

SEOXYL

prevents SEA-SICKNESS

A pharmaceutical preparation, discovered by a prominent practicing physician. Thoroughly tried out under any and all conditions and definitely proven a positive preventive of and relief for sea-sickness.

Used and recommended by ship surgeons; endorsed by the Cruising Club of America and by boating publications.

Safe—Sure—Harmless

Not a secret remedy—formula on every package. Contains no harmful drugs; not a depressant; will not injure even those in delicate health. Leaves no unpleasant after-effects. Easy to take—only one tablet, at long intervals.

If you get sea-sick—if you have friends who get sea-sick—try SEOXYL once; just once. That's all we ask. Get it at your druggist's.

If your druggist can't supply you send $1.00 for enough SEOXYL for 10 days' continuous outing. Satisfaction guaranteed or money refunded.

SEOXYL SALES CO. LTD.
Dept. H
11 Broadway New York, N. Y.

DEALERS and BUILDERS—LOOK!

Seoxyl BELONGS in the emergency kit! Boatsmen will thank you for a bit of foresight in helping them thwart the sinister shadow of sea-sickness! So, whether you are delivering a brand-new, fully equipped craft; or a new emergency kit; or re-stocking a kit that's seen service—include SEOXYL! Write for big-profit proposition to dealers.

Address Dept. H-1

Advertising Index will be found on page 384

HENRY J. GIELOW, Inc.

Naval Architects
Engineers
Yacht Brokers

(c) Edwin Levick, New York

25 West 43rd Street New York, N. Y.

Telephone: Murray Hill 9134

The Salon of David C. Whitney's Yacht "Sumar."
Furnishings by Raphael.

INVARIABLY the exquisite charm of yacht interiors is not a matter of luck in happening to select harmonizing furnishings, but rather the result of skill and knowledge of the specialists.

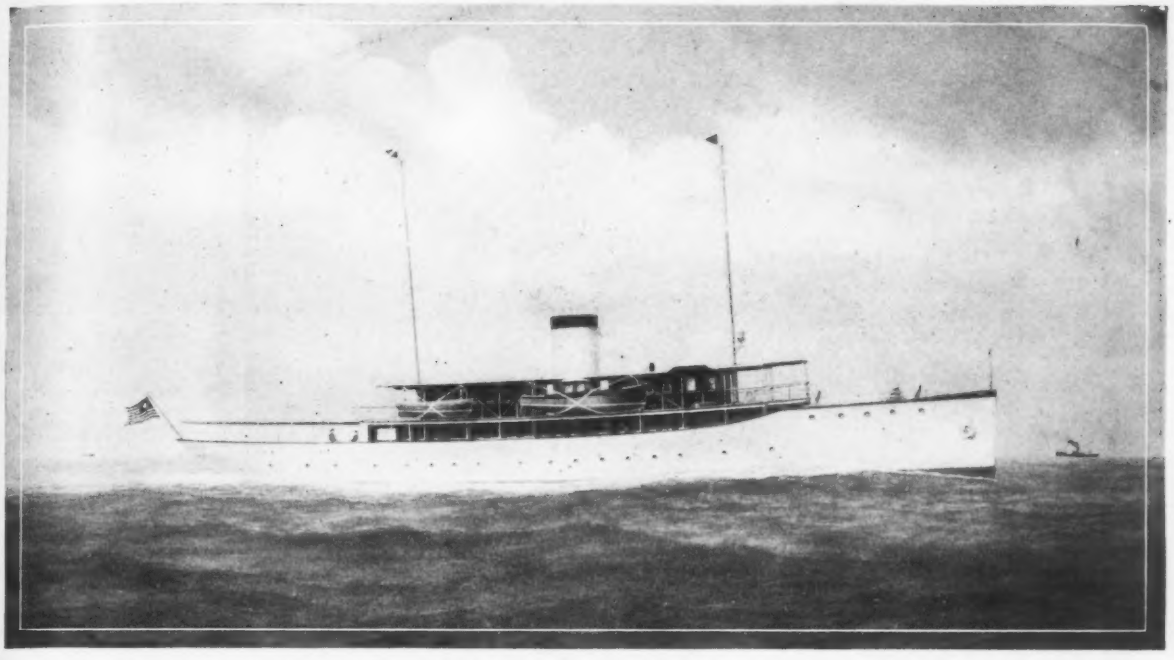
Raphael Studios, Inc.

Specialists in Interior Decorating of Yachts

38 East 50th Street, New York

Phone: Plaza 7125

NAVAL ARCHITECTS GIELOW YACHT BROKERS



The new 171-foot ocean going yacht for Mr. J. L. Livermore of New York, designed by Henry J. Gielow, Inc., and being built by Geo. Lawley & Sons Corp., is powered with a pair of six cylinder, 800 H. P. direct reversible Bessemer Diesel Engines. Auxiliary power furnished by two 60 H. P. Bessemer Diesel Engines.

The Finest Engines for the Finest Yachts

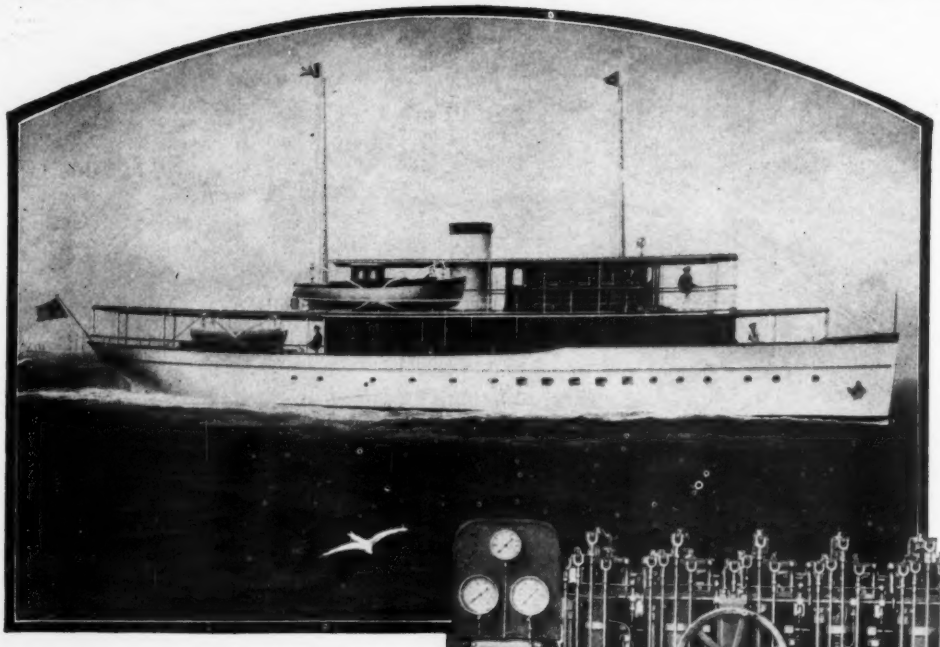
THE power equipment of any boat is unquestionably a deciding factor in appraising its value. Bessemer Diesel Engines *do* make better boats, because of their greater value in reliability and economy. This is being forcefully demonstrated by the constantly increasing number of Bessemer Diesel powered yachts, fishing boats, tow boats and other commercial craft that are constantly registered in the roster of Bessemer craft. More and more naval architects are specifying Bessemer Diesels, more and more owners are demanding the dependable Bessemer power.

THE BESSEMER GAS ENGINE COMPANY
32 Lincoln Avenue ∴ ∴ ∴ Grove City, Pa.

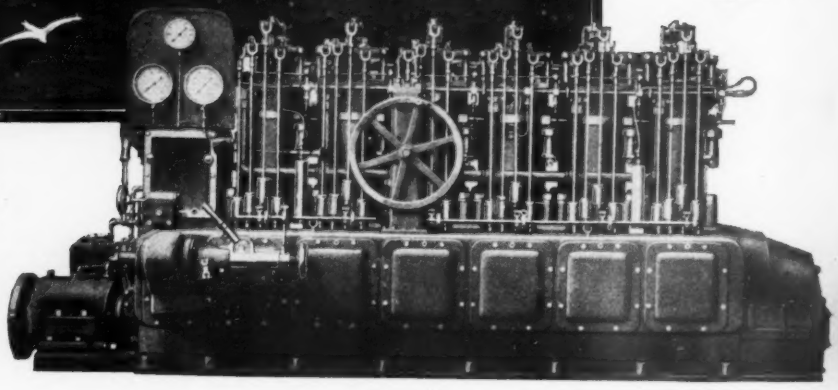
BESSEMER

DIESEL ENGINES

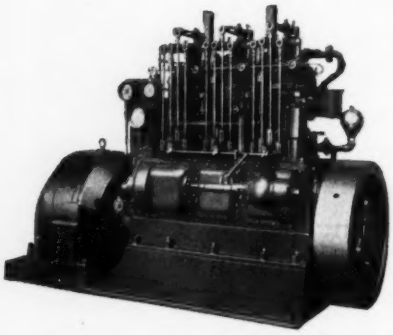
NAVAL ARCHITECTS GIELOW YACHT BROKERS



The "Alpha" owned by Mr. George Marshall Allen of New York, designed by Henry J. Gielow, Inc., and built by Welin Davit & Boat Corp., is powered with two 125-150 H. P. direct reversible Bessemer Diesel Engines.



The operating side of the 125-150 H. P. direct reversible Bessemer Diesel Engine. Other horsepower sizes — 170, 230, 360, 420, 670, 750, 800, 1000.



The three cylinder, 60 H. P. Bessemer Diesel Engine with generator and sub-base for auxiliary purposes.

BESSEMER DIESEL ENGINES have been developed and perfected by engineers long skilled in oil engine design—experts with a collective experience of more than eighty years of specialization in Diesel engineering.

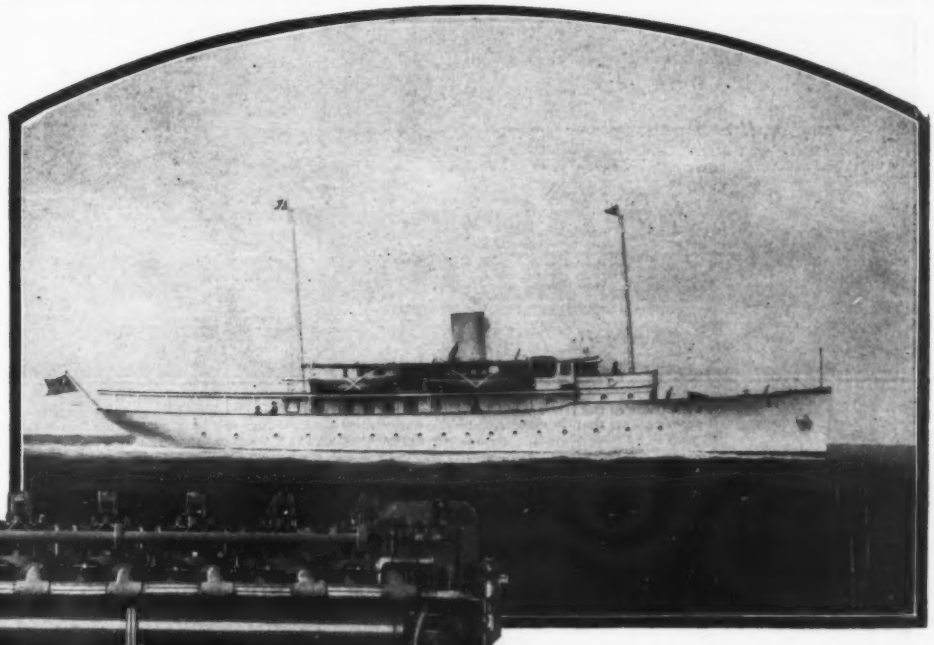
Bessemer Diesel Engines are backed by one of the world's largest manufacturers of internal combustion engines who has for more than a quarter century maintained an undisputed leadership in quality.

Every Bessemer Diesel Engine is built to do more than is required of it. They are rated honestly, and consistently deliver every ounce of their rated power, and at the crucial moment when reserve power is urgently needed a Bessemer Diesel can be relied upon to deliver it.

BESSEMER

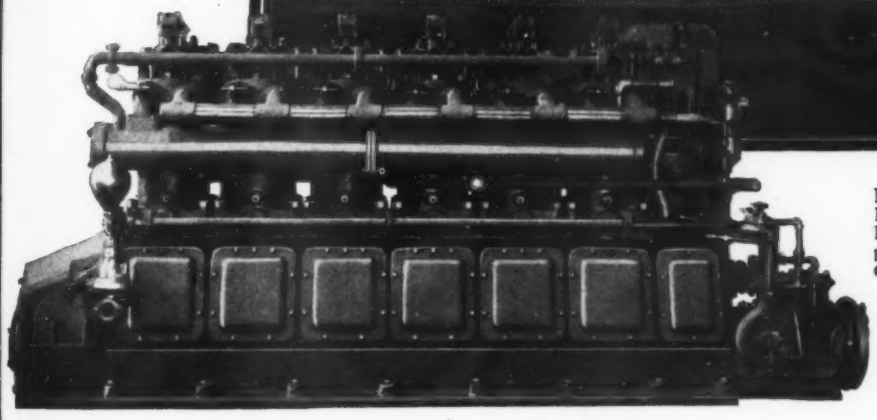
DIESEL ENGINES

NAVAL ARCHITECTS GIELOW YACHT BROKERS



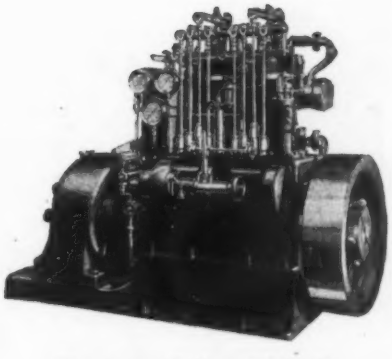
This 160-foot yacht designed by Henry J. Gielow for Mr. David C. Whitney of Detroit, is to be powered with two 6-cylinder 420 H.P. direct reversible Bessemer Diesel Engines.

Auxiliary power furnished by two Bessemer 60 H. P. Diesel generating sets.



Exhaust side of the 125-150 H.P. direct reversible Bessemer Diesel Engine. Other horsepower sizes—170,230,360,420, 670, 750, 800, 1000.

WITH a Bessemer Diesel Engine as power for your yacht the cost of operation is the lowest obtainable. Bessemers are unique in every phase of design and construction. They are ideal power plants for yachts, where smoothness and quietness of operation, clear, odorless exhaust, and sheer beauty of equipment are desirable additional features to rugged dependability and economy. They are built with a wide margin of surplus strength to meet the hardest continuous usage of marine service. Pistons and connecting rods of exceptional length and long main bearings of large diameter assure unusually long life. Scores of users bear witness to Bessemer superiority.

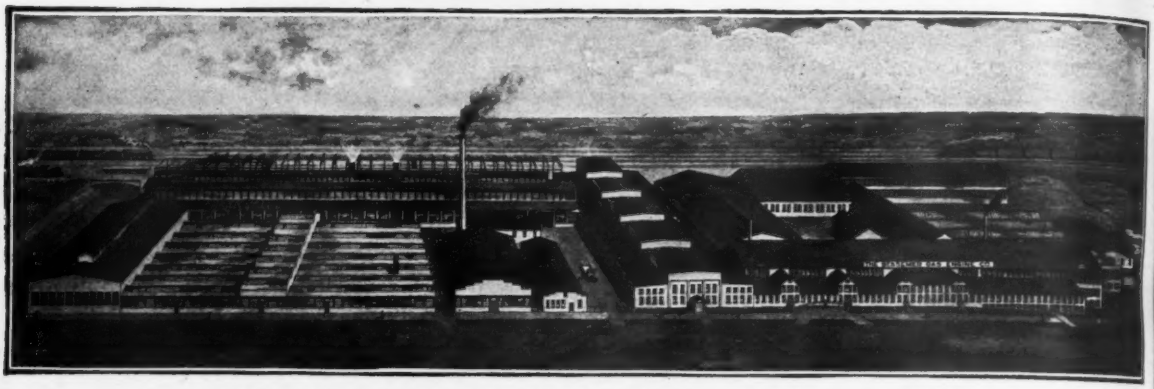


The two cylinder, 40 H. P. Bessemer Diesel Engine with generator and sub-base for auxiliary purposes.

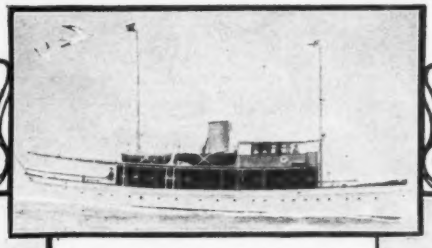
BESSEMER

DIESEL ENGINES

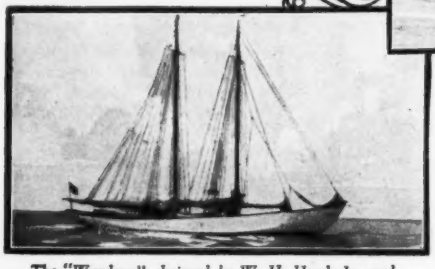
NAVAL ARCHITECTS GIELOW YACHT BROKERS



The home of the Bessemer Diesel Engine where over 1100 men are employed the year round building power plants that do maintain the Bessemer motto, "You buy the best when you buy a Bessemer."



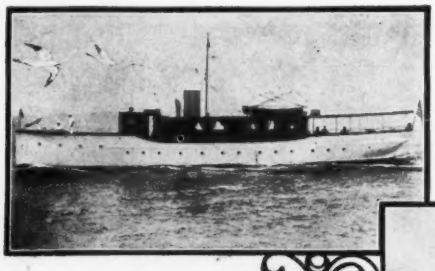
The "Alcedo", designed by Thomas D. Bowes and owned by Mr. G. W. Drexel of Philadelphia is powered with a pair of 170 H.P. direct reversible Bessemer Diesel Engines.



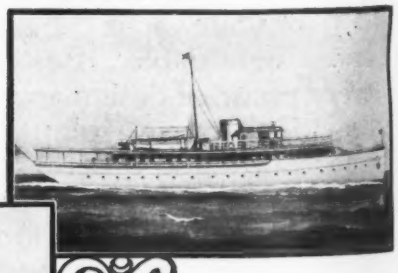
The "Wanderer", designed by W. H. Hand, Jr., and owned by Mr. R. W. Allen of New York is powered with a 230 H.P. direct reversible Bessemer Diesel Engine. Auxiliary power furnished by a 60 H. P. Bessemer Diesel Engine.

A. Y. Gowen's new yacht "Speejacks II", designed by Wm. H. Hand, Jr., and built by Geo. Lawley & Son Corp., is powered with a 230 H. P. direct reversible Bessemer Diesel Engine. Auxiliary power is furnished by a 40 H.P. Bessemer Diesel Engine.

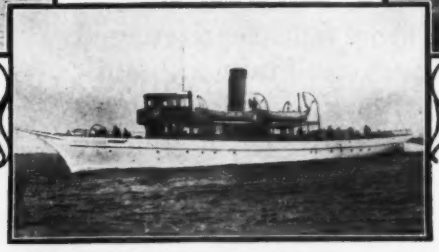
THE BESSEMER GAS ENGINE COMPANY



"Giralda", fishing party boat, owned by Capt. David Martin, Sheepshead Bay, N.Y., powered with a 420 H.P. direct reversible Bessemer Diesel Engine.



The "Windsor II", designed and built by the Defoe Boat & Motor Works and owned by the Douglas Security Co. of Omaha is powered with a 125-150 H. P. Bessemer Diesel Engine, with a reverse gear.



The "Sylvia IV", owned by Mr. Logan G. Thomson of Hamilton, Ohio, designed by John H. Wells, Inc., and built by the Defoe Boat & Motor Works, is powered with a pair of 230 H.P. direct reversible Bessemer Diesel Engines.

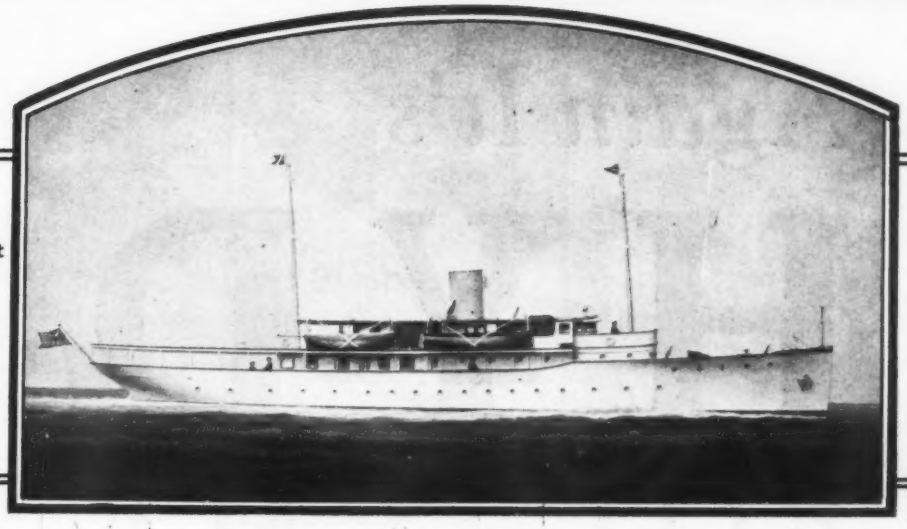
There is a Bessemer Diesel Engine for every marine requirement—from 50 H. P. to 1000 H. P. Let our engineers assist you in the solution of your power requirements.

THE BESSEMER GAS ENGINE COMPANY
32 Lincoln Avenue ∴ ∴ ∴ Grove City, Pa.

BESSEMER

DIESEL ENGINES

NAVAL ARCHITECTS GIELOW YACHT BROKERS



160-Foot Diesel Yacht
SUMAR
for
David C. Whitney
Detroit

TODD FACILITIES
REACH FROM COAST TO COAST

TODD facilities won the construction contracts for these two big Diesel yachts, the 160-foot Sumar for David C. Whitney, of Detroit, and the 171-foot yacht (as yet unnamed) for D. C. Davis, of Tampa and St. Augustine, Fla.

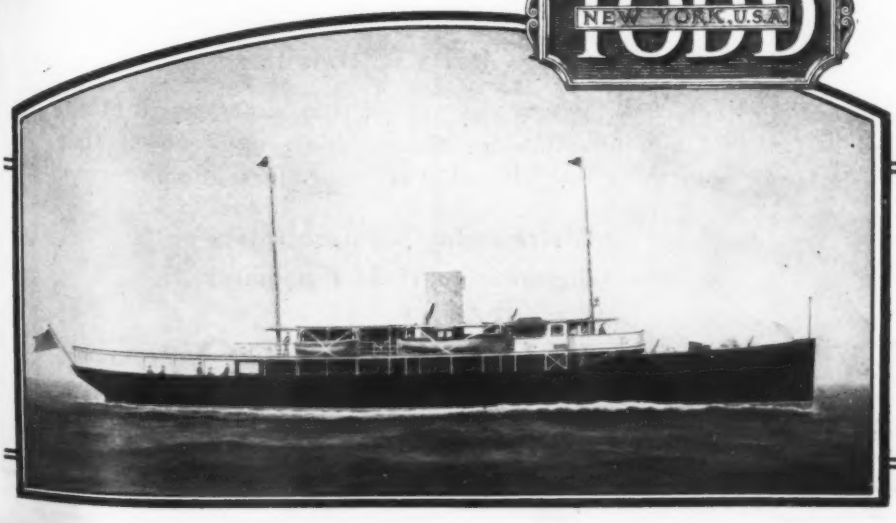
At Tebo Yacht Basin, its specialized yacht yard, the Todd Shipyards Corporation offers the most complete shipbuilding plant devoted particularly to yacht work. Many of the largest steam, Diesel and auxiliary yachts have been built or reconditioned at this yard.

This organization of national scope, operating seven shipbuilding plants at Atlantic, Pacific and Gulf ports, is at owner's service for repairs or storage, as well as for construction or reconstruction.

Shipbuilders and Repairers, Engineers, Boiler Makers. Oil-Burning Equipment. Diesel Engine Installations, Electric Drive Installations.

TODD SHIPYARDS CORPORATION
Plant of Tebo Yacht Basin
Foot of 23rd Street, Brooklyn, N. Y.

TODD
NEW YORK, U.S.A.



171-Foot Diesel Yacht
for
D. C. DAVIS
Tampa and St. Augustine

NAVAL ARCHITECTS GIELOW YACHT BROKERS

Again It's

HYDE
EQUIPMENT

Surely there must be something different and something better in Hyde products that causes them to be used on America's finest yachts. And now, comes another Hyde equipped yacht, the Athero, being built under the direction of Henry J. Gielow, Inc., Naval Architects, for Jesse L. Livermore of New York. The Hyde equipment includes:

Hyde Propellers
Hyde Electric Vertical Windlass
Hyde Hydro-Electric Steering Equipment

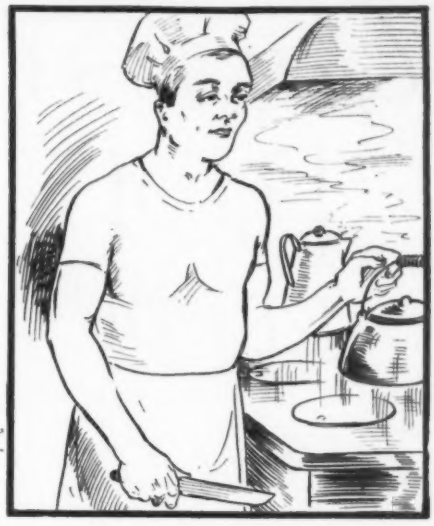
Another Gielow designed yacht under construction, the Sumar, for David C. Whitney of Detroit will be Hyde equipped with special Turbine Type (TRUE SCREW) Propellers.

Every boat owner, and prospective owner, naval architect and boat builder should know more about that "something" which makes Hyde products the preferred.

Write today for descriptive literature on Hyde Equipment

HYDE WINDLASS CO.
BATH **MAINE**

With the Kewanee System of Water Supply you have running water when you want it, even though all the other outlets are in use.



The culinary department on a Kewanee equipped yacht is never handicapped because of the lack of water pressure.

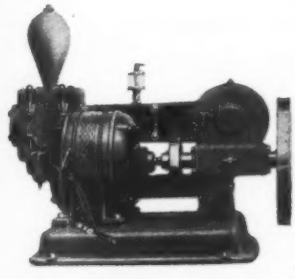
The KEWANEE System of WATER SUPPLY

Is Specified for the Whitney and Livermore Boats

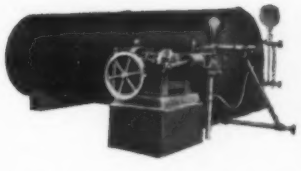
HENRY J. GIELOW, INC., designer of the new 171-foot Diesel yacht for Jesse L. Livermore and the 160-foot Diesel yacht for David C. Whitney, specified the Kewanee System of Water Supply for these boats because it has emphatically proven its superiority on many of the finest yachts afloat.

For further details address:

Kewanee Private Utilities Co.
710 Franklin Street
KEWANEE, ILLINOIS

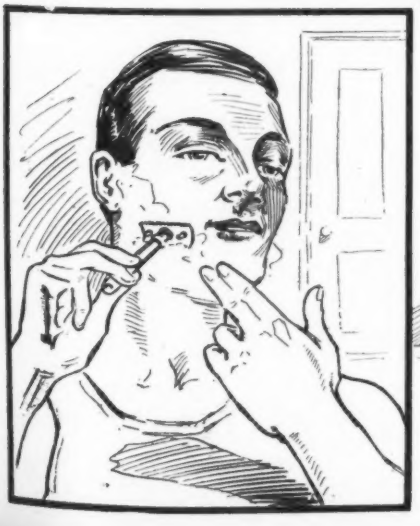


The Kewanee Automatic Electric Pump. A silent, compact and clean running unit. Capacity, 324 gallons per hour.



The complete Kewanee Water Supply System with pneumatic tank.

There is a big difference in shaving with the convenience of running water on a yacht. You have all the advantages of city water.



Dropping buckets overboard or hand pumping for cleaning water is unnecessary on a Kewanee equipped yacht. You have water under pressure all of the time.

NAVAL ARCHITECTS GIELOW YACHT BROKERS

Yachts Equipped with BRUNSWICK REFRIGERATING PLANTS *Include the Finest Afloat*

WE are particularly gratified at the selection of the Brunswick-Kroeschell System for the two new Gielow designed Diesel yachts, the Athero and the Sumar. Not merely because the selection represents two orders, but because it represents something more valuable to us and important to you. It is a twofold endorsement of the Brunswick-Kroeschell System from one of America's foremost naval architects, Henry J. Gielow, Inc.

The Brunswick-Kroeschell System is used on the following yachts whose owners are numbered among America's most prominent yachtsmen.

YACHT	OWNER
ABSEGAMI	Allen K. White
ALLEGRO	Col. James Elverson
ALPHA III	George Marshall Allen
ARCADIA	Galen L. Stone
ATHERO II	Jesse L. Livermore, Esq.
CAPTIVA	Harry Payne Whitney
DAUNTLESS	H. W. Hanan
EL DORADO	William Liebe
GOODWILL	Keith Spalding
GRACEWIN	Wm. H. Campbell
GADFLY	Fre'k. H. Rawson
IRWIN	J. H. Hielner
JOSEPHINE	E. S. Burke, Jr.
YACHT MAY	J. R. DeLamar
MIRAMAR	H. C. Coffin
MIRAMAR	J. F. Baudouine
MIRAMAR	E. M. Statler

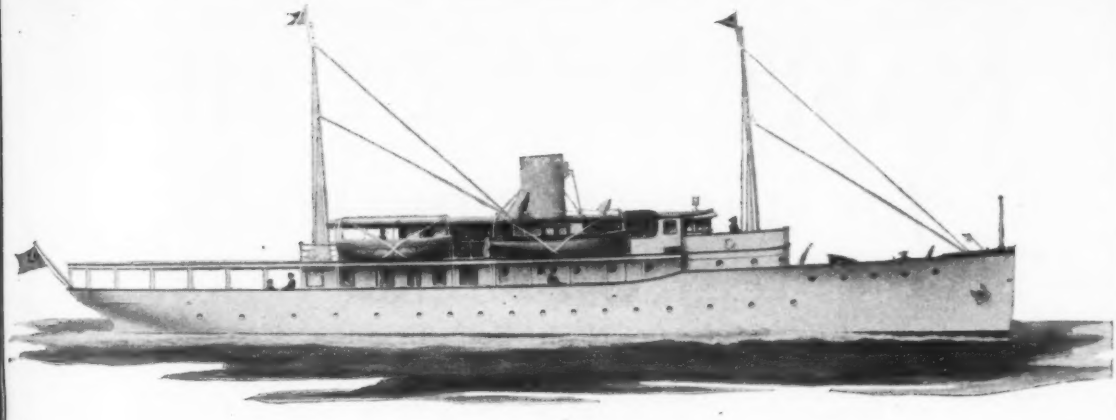
YACHT	OWNER
NARADA	Henry Walters
ONEIDA	Wm. Randolph Hearst News Service
PAWNEE	W. L. Mellon
PAWNEE	Harry Payne Bingham
ROBADOR	Robert Law, Jr.
SAVARONE	Richard L. Cadwalador, Jr.
SONNICA	E. S. Burke, Jr.
STELLARIS	J. M. Schlotman
SWORDFISH	Schuyler Schieffelin
SPEEJACKS	A. Y. Gowen
SIALIA	Henry Ford
SEYON III (EX ARAS)	H. K. Noyes
SUMAR	David C. Whitney, Esq.
TAORMINA	Wm. S. Eaton
WARRIOR (EX VANADIS)	Harrison Williams
WHILEAWAY	Harry Payne Whitney
ZODIAC	R. W. Johnson

Brunswick-Kroeschell engineers will be glad to aid you insolving any refrigeration problem.

BRUNSWICK-KROESCHELL COMPANY

NEW BRUNSWICK, NEW JERSEY **CHICAGO, ILLINOIS**

NAVAL ARCHITECTS GIELOW YACHT BROKERS



SUMAR Owned by David C. Whitney, Detroit

H. J. Gielow, Naval Architect

TO BE EQUIPPED WITH

The DUO-ART REPRODUCING PIANO

AGAIN, the DUO-ART is chosen for one of the season's magnificent power yachts now building. For the battleships of the world's navies; in the salons of the great liners sailing the seven seas; aboard sail and power yachts abroad and at home, the DUO-ART is supreme afloat as on shore.

The DUO-ART Reproducing Piano alone meets the extremes of climate, hot and cold, sunshine and rain, faithfully reproducing the piano playing of the great artists, Paderewski, Hofmann, Bauer, Gabrilowitsch, Ganz, Grainger, etc.; and the playing of popular and dance music by the favorites of Broadway. The DUO-ART is obtainable in Steinway, Steck and world famous Weber pianos.

The AEOLIAN COMPANY

Foremost Makers of Musical Instruments in the World

Aeolian Hall · New York

LONDON · PARIS · MADRID · MELBOURNE · SYDNEY

NASH Self-Priming Centrifugal PUMPS

for all yacht purposes

By specifying Nash Self Priming Centrifugal Pumps for the pump equipment on the Diesel yacht SUMAR, the architects, Henry J. Gielow, Inc., have placed their stamp of approval on Nash Centrifugal Pumps for all yacht purposes. The self priming feature of these Nash Pumps makes them especially desirable for yacht installations or wherever a reliable and trouble proof self acting pump is required.

The Kerr equipment on the SUMAR includes the fire pump, bilge pump, two lubricating oil pumps and three fuel oil pumps. The fuel pumps transfer the oil from the main tank to the daily service tank, also pump the fuel to and from the Centrifuge oil separator.

Similar Kerr pump equipment will be used throughout the new Gielow designed 170 foot Diesel yacht just ordered by D. P. Davis of Tampa and St. Augustine, Florida.

Full information, catalog or prices on request.

KERR MACHINERY CORPORATION
Kerr Building
Fort and Beaubien Streets Detroit, Michigan

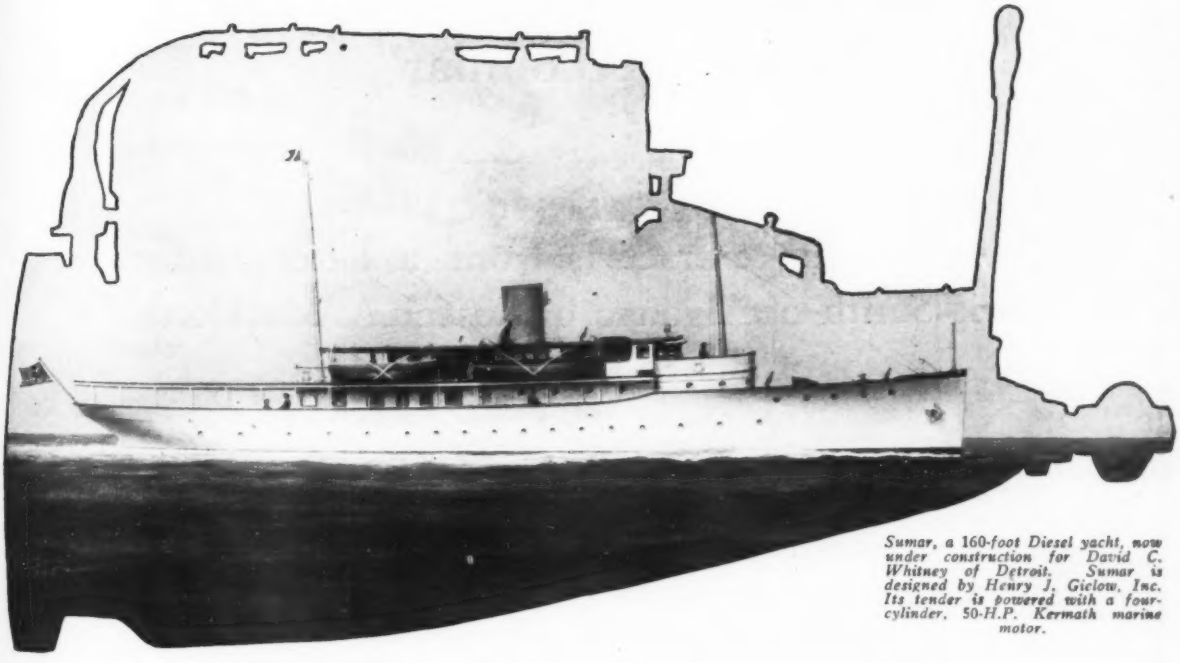
Factory:
Nash Engineering Co., South Norwalk, Conn.

Nash Hytor

NAVAL ARCHITECTS GIELOW YACHT BROKERS

KERMATH
BOAT ENGINES

Chosen for the SUMAR'S Tender



Sumar, a 160-foot Diesel yacht, now under construction for David C. Whitney of Detroit. Sumar is designed by Henry J. Gielow, Inc. Its tender is powered with a four-cylinder, 50-H.P. Kermath marine motor.

KERMATH marine motors are sold every day in the year to power many different types of boats in all parts of the world. The all around efficient performance of the Kermath is responsible for its tremendous sales and was the deciding factor in its selection as the power plant for the Sumar's tender.

Whether you judge a Kermath from the standpoint of dependability, power or economy, you will find it the foremost buy on the market.

Write today for complete catalog

3 H.P. to 100 H.P.—$135 to $1,450

KERMATH MANUFACTURING COMPANY

5879 Commonwealth Avenue — Detroit, Michigan

11 E. Wellington St., Toronto, Ont.

NAVAL ARCHITECTS GIELOW YACHT BROKERS

Chris-Craft is not unmindful of the distinction accorded it in being chosen as Tender Equipment for the "Sumar"

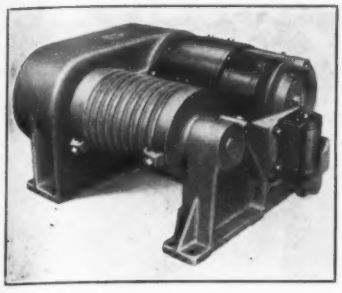
The following extract is from a letter sent to Chris Smith of Algonac by Joseph A. MacDonald of Henry J. Gielow, Inc.

"—It has been a pleasure to work on the Sumar, as we were given unusual latitude to put into it the best to be had regardless of cost, not only in features of construction but in materials and equipment. Our selection of your product is therefore an unhampered endorsement, not only by ourselves but also by the owner for whom we are acting."

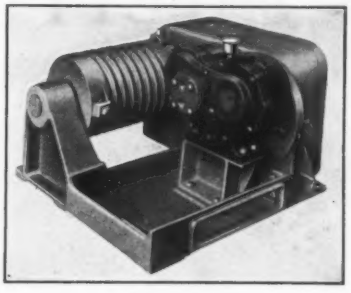
This is the second Chris-Craft to be delivered to Mr. David C. Whitney of Detroit

CHRIS SMITH & SONS BOAT CO.

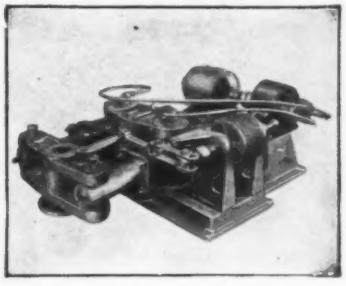
ALGONAC *Largest Builders of Fast Runabouts* MICHIGAN



A-E-CO Electric Drum Type Steerer



A-E-CO Air Steerer



A-E-CO Electro-Hydraulic Steerer

Endorsed by the leading designers and builders of fine yachts

A few of the Yachts and Powerboats equipped with A-E-CO Auxiliaries during 1925

Aloha
Dauntless
Sialia
Janey III
Taormina
Atryta
Bolo
Pawnee
Lyndonia
Alcedo
Samuri
Irwin
Gannet
Naiad
Skylark
Limulus
Onwego
Delilah II
Blue Water
Mimspearl
Grace Win
Waseca
Spray II
Countess
Loleta
Oniak
Shadow K
Fame
Naroca
Fan Kwai
Nashira
Terry Bill II
Rascal
Romany II
Tondeleyo

FOR over sixty years, America's finest yachts have been equipped with steerers, windlasses, boat hoists and other auxiliaries built in our shops.

In 1925, as in previous years, A-E-CO Auxiliaries were the choice of leading designers and builders everywhere. A partial list of last year's installations is given.

Absolute reliability, rugged strength, high efficiency, space-saving compactness and smart appearance are characteristic A-E-CO features that win the enthusiastic approval of critical marine engineers and veteran yachtsmen alike.

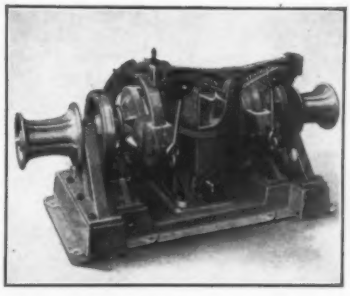
A-E-CO Auxiliaries have been installed on many of the famous yachts designed by Henry J. Gielow, Inc., such as the Delphine, Miramar, Mamie O, Moby Dick, Goodwill, Grace Win, and will be installed on the big Diesel yachts now being built for Jesse L. Livermore and David C. Whitney.

The A-E-CO Line is a comprehensive one and covers the requirements of pleasure craft of every size and type, from the palatial yacht to the small cabin cruiser. A number of popular machines are shown in the illustrations.

Some of our recent developments are described in the YACHT and WORKBOAT FOLDER, copy of which will be sent on request. For complete details of the entire line, send for Yacht Section, Catalog 21.

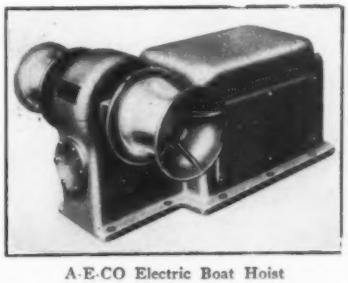
American Engineering Company
2419 Aramingo Avenue, Philadelphia

"Leaders in the Marine Field for over Sixty Years"

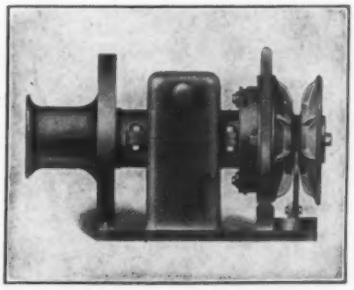


A-E-CO Electric Worm Geared Windlass

A-E-CO Motorboat Electric Windlass, Wildcat Type



A-E-CO Electric Boat Hoist



A-E-CO Hand Pump Brake Windlass

NAVAL ARCHITECTS GIELOW YACHT BROKERS

SMITHSON SAFETY PORTHOLE

THE BEST AIRPORT ON THE MARKET

Selected by

HENRY J. GIELOW, INC.

for

DIESEL YACHTS	OWNERS	BUILDERS
"Athero II"	Jesse L. Livermore, Esq.	Geo. F. Lawley & Son Corp.
"Sumar"	David C. Whitney, Esq.	Todd D. D. & Engineering Corp.
.....	D. P. Davis, Esq.	Todd D. D. & Engineering Corp.

NOTE:—Attractive in appearance. Simple, strong and practical in mechanical construction. Smooth and positive in action. Can be operated by a child. Door can be opened or closed watertight in a second's time. Even pressure on door when closed. Glass breakage eliminated.

Available for those who want the best

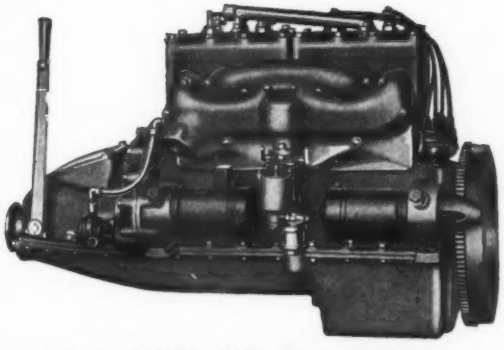
MERCANTILE SPECIALTIES CORP.

ELEVEN BROADWAY NEW YORK CITY

NAVAL ARCHITECTS GIELOW YACHT BROKERS

Scripps

Powers the Owner's Tender of the ATHERO II



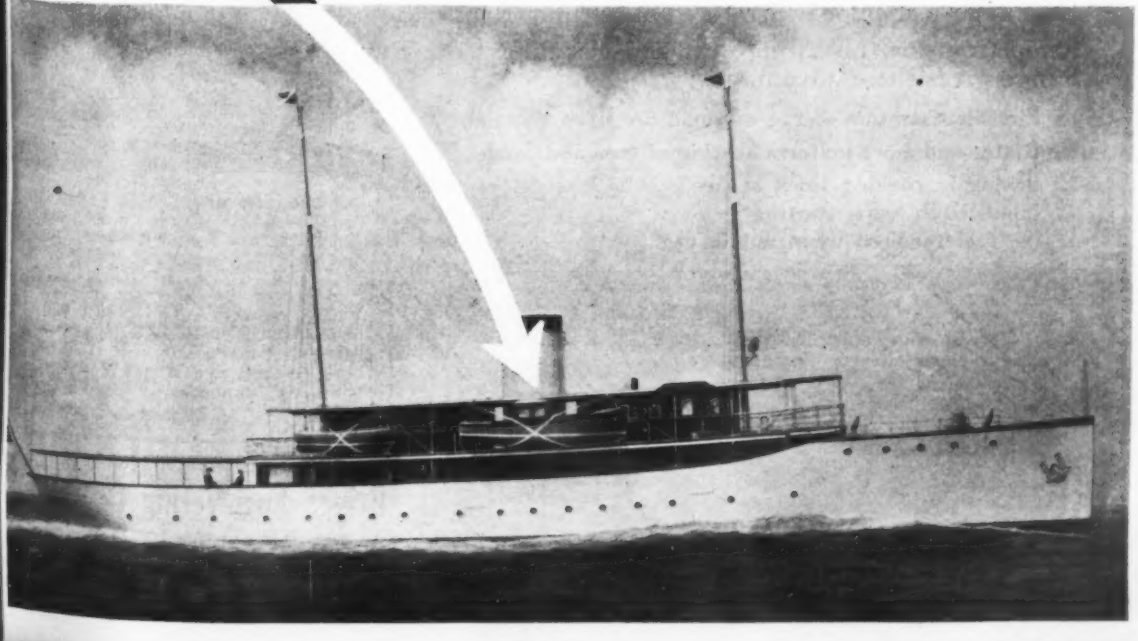
F-4 15-40 H.P., Medium Duty 40-60 H.P., High Speed Including Electric Starter **$750**

THE owner's tender of the new 170-foot Diesel yacht Athero II, now under construction for Jesse L. Livermore of New York, will be powered by the Scripps Model F-4 marine engine.

Speedy and safe transfer between the Athero's anchorage and the shore is assured the owner and his guests with the Scripps F-4 on the job. It is a trouble-free motor; always ready to run. It's made right and has all the quality that's possible to put in a marine engine. That's why the designers of this fine yacht, Henry J. Gielow, Inc., selected the Scripps F-4 for such an important service.

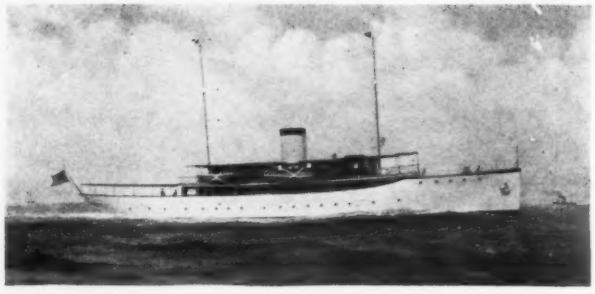
SCRIPPS MOTOR CO.

5819 Lincoln Avenue Detroit, Mich.



NAVAL ARCHITECTS GIELOW YACHT BROKERS

ATHERO II



Gentlemen:

Although the designing of fine yachts has been our business for thirty-five years and Gielow boats have materially influenced marine engineering practice during that time, we are especially proud of two big yachts that are coming through now. We refer to the 171-foot Diesel yacht being built for Jesse L. Livermore of New York, and the 160-foot Diesel yacht for David C. Whitney of Detroit, two of the most prominent yachtsmen in the country.

It has been a pleasure to work on these two boats, as we were given unusual latitude to put into them the *best to be had, regardless of cost*—not only in features of construction but in materials and equipment. Our selection of your products is therefore an unhampered indorsement, not only by ourselves but also by the owners for whom we are acting.

Very truly yours,
(Signed) HENRY J. GIELOW, INC.

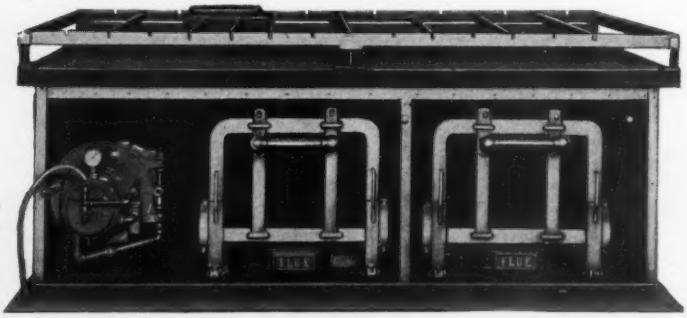
EDWARD SMITH & CO., 127 West Ave., Long Island City

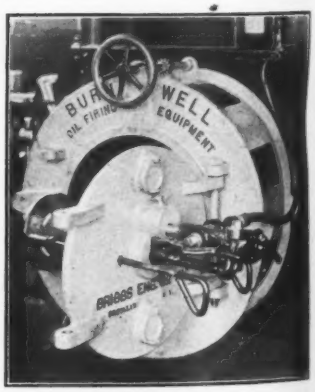
Ray Oil Burning Range for the Galley

THE new Diesel yachts Athero II and Sumar designed by Henry J. Gielow, Inc., will have spotless and efficient galleys equipped with Ray Oil Burning Ranges.

Aside from low operating cost and cleanliness the Ray Range gives these advantages:

1. **Flexible operation—large or small fire upon demand.**
2. **Better and more uniform heating of tops and ovens.**
3. **Saving in cooking time, as fire can be brought to maximum immediately upon starting.**
4. **No fuel required when not in use.**





The "Burnwell" Oil Firing Unit shown here is used on such famous yachts as: Rambler, Sialia, Oneida, Sachem, Joyance.

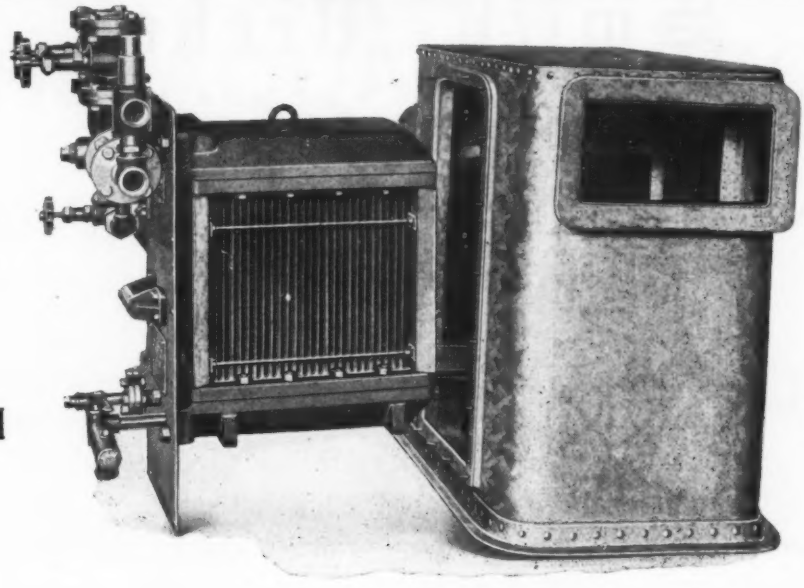
Yachts on the Atlantic coast will find complete repair facilities at our basin on Jamaica Bay, foot of Flatbush Avenue, Brooklyn. Wharfage with all conveniences. Winter storage.

Main Office and Works:

Briggs Engineering Co., Inc.
219-227 Twenty-fourth St.
BROOKLYN, N. Y.

NAVAL ARCHITECTS GIELOW YACHT BROKERS

Used on the ATHERO II



Used on the SUMAR

Warm in Winter
Cool in Summer

Heating, cooling and ventilation of ship quarters can readily be secured by the use of

S & K THERMOFANS

The oval tubes insure easy flow for the air. Steam or hot jacket water used for heating, sea-water for cooling.

Send for Bulletin 11-T

Other S. & K. equipment for Diesel-driven boats include oil coolers, jacket water coolers, oil strainers, gear pumps, fuel oil burning equipment for donkey boilers, evaporators and distillers.

SCHUTTE & KOERTING COMPANY

12th and Thompson Streets, PHILADELPHIA, PA.

NAVAL ARCHITECTS GIELOW YACHT BROKERS

Smith-Meeker

Engineering Company

MARINE ELECTRICAL ENGINEERING SERVICE
ELECTRICAL INSTALLATIONS

THE complete electrical installation on the Gielow designed Diesel yacht SUMAR is typical of the specialized yacht service of the Smith-Meeker Engineering Corporation. Naval architects of the highest standing specify Smith-Meeker electrical installations because they realize this insures expert workmanship and complete attention to every detail, also familiarity with marine electrical requirements and undivided responsibility for the perfect functioning of the entire installation.

Edison Storage Batteries furnished for yachts SUMAR and ATHERO II. We are exclusive Marine Distributors of Edison Storage Batteries for Middle Atlantic States.

For information or estimates address

SMITH-MEEKER ENGINEERING CO.

123 Liberty Street, New York

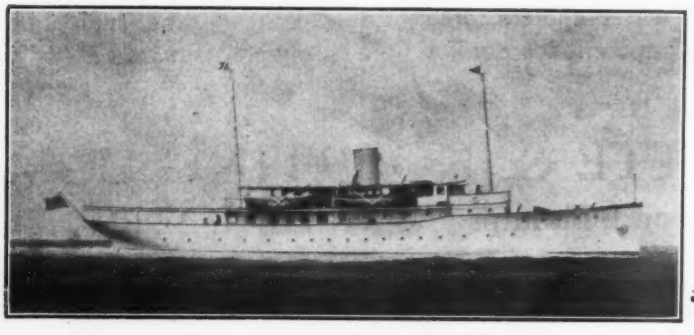
Marine Electrical Engineers

DISTRIBUTORS FOR

Edison Storage Batteries

Winton Gasoline Generating Sets
Universal Generating Sets

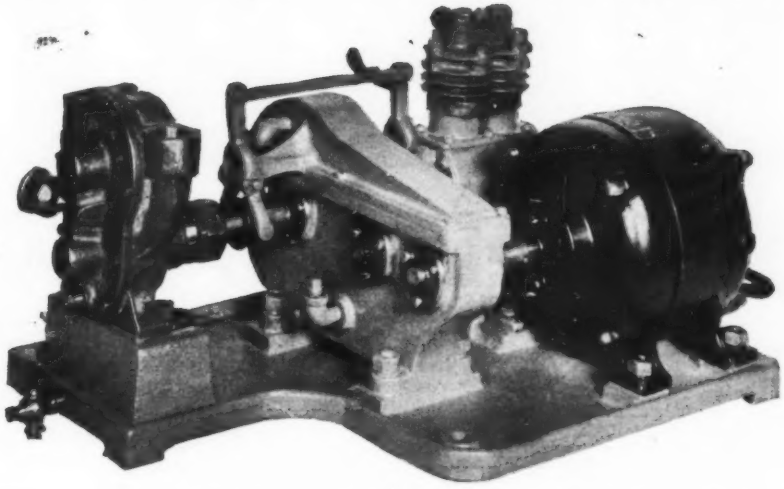
American Engineering Co. Yacht Auxiliaries
Homelite Generating Set



MEMBER

Announcing

THE AQUA-PRESSOR



COMPRESSED air for whistle, water and fuel supply, and a high pressure self-priming water pump for bilge and for washing down decks, muddy anchors, etc., are now available for any yacht equipped with an independent lighting plant. Either the compressor or pump may be operated independently. 32 or 110 volt motor, developing ¼ H. P. and using very little battery current.

Capacity of Air Compressor: 1.8 cu. ft. per minute. Pressure up to 125 lbs. per sq. in.
Capacity of Pump: ¾" outlet. 5.5 gal. per minute. Pressure up to 90 lbs. per sq. in.

HI-DUTY WATER PUMPS

A better pump for water, oil or fuel supply on yachts and marine motors. Especially adapted for use on fast turning engines. Made in six types and sizes from ⅜" up to ¾".

Hi-Duty Pumps are made from the finest materials, accurately machined and are exceptionally long lived. Two grease cups provide a thorough system of lubrication to every moving part. Bearings and shafts are unusually liberal in size. Idler gear operates at ¾ pinion gear speed.

Complete description and prices on request.

MANUFACTURED EXCLUSIVELY BY

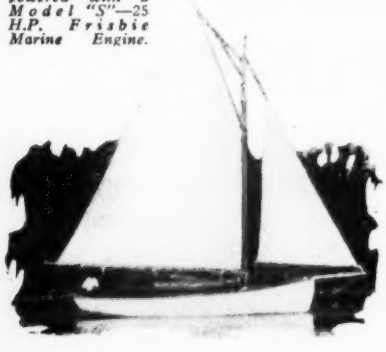
BOWLER, HOLMES AND HECKER COMPANY

259 GREENWICH ST., NEW YORK CITY

The Silent FRISBIE VALVE-IN-HEAD ENGINE

OVERHEAD valve engines are the most powerful known. The Frisbie Motor Company for more than twenty years has been manufacturing a long line of valve-in-head engines for marine service. The most recent Frisbie model, the silent "S," is a powerful, rugged, quiet and clean motor representing the pinnacle in quality.

Sunbeam, an auxiliary schooner, owned by Mr. T. F. Paradise of New Haven, Conn. Sunbeam was designed by Wm. H. Hand, Jr., built by the Portland Yacht Yard, Inc., Portland, Conn., and is powered with a Model "S"—25 H.P. Frisbie Marine Engine.



Katharine, a 26' x 8' cruiser, owned by Mr. Henry G. Klett of New York City. A Frisbie Model "S" 25 H.P. marine engine was installed on the Katharine in the spring of 1925. In a recent letter Mr. Klett wrote: "The engine has given very splendid service all summer."

Frisbie Marine Motors Will Be Exhibited by the Sexton Motor Co., at the New York Motor Boat Show, Grand Central Palace, January 22nd to 30th. Block M.

FRISBIE MOTOR CO

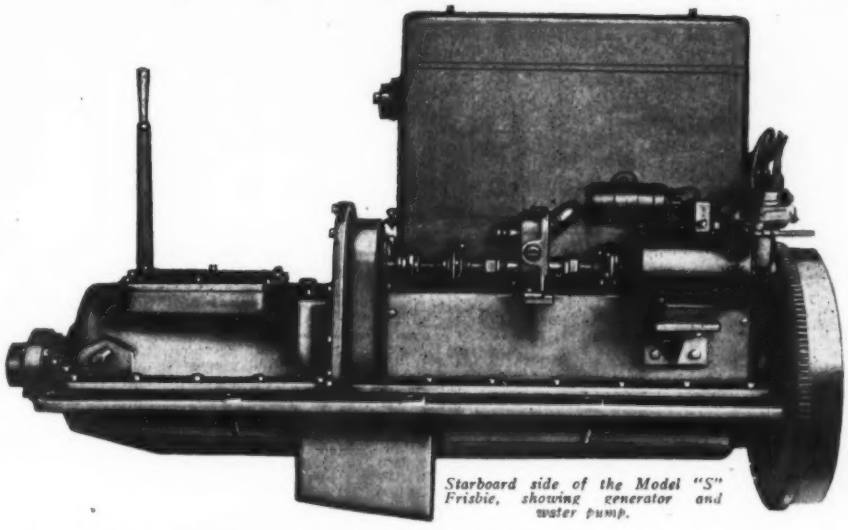
7 College St., Middletown, Conn.

Advertising Index will be found on page 384

FRISBIE

Model "S"

THE low price of this new Frisbie Valve-in-Head engine puts within reach of every boating fan a real sturdy sea-going power plant. It is always ready to start and will run as long as you want it to. It's the kind of an engine you can depend upon in an emergency and to give a lifetime of trouble-free service.



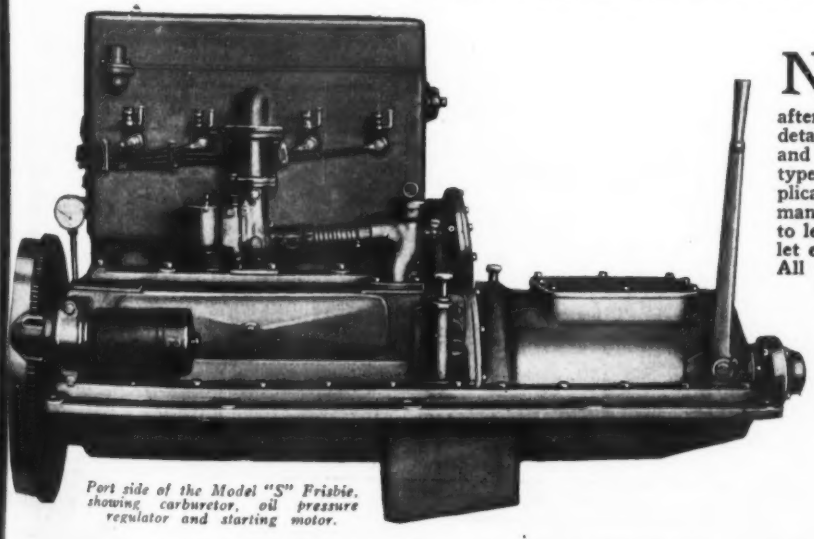
Starboard side of the Model "S" Frisbie, showing generator and water pump.

Price: Complete as Shown, Ready to Run: $715

POWER DEVELOPED

18 H.P.	600 R.P.M.	30 H.P.	1000 R.P.M.
20 H.P.	700 R.P.M.	33 H.P.	1200 R.P.M.
23 H.P.	800 R.P.M.	35 H.P.	1300 R.P.M.
26 H.P.	900 R.P.M.	40 H.P.	1500 R.P.M.

Bore, 4". Stroke, 5". Displacement, 251 cubic inches.



Port side of the Model "S" Frisbie, showing carburetor, oil pressure regulator and starting motor.

NOTICE how clean cut this engine is,—free from cumbersome parts looking like "tacked on afterthoughts." The cylinder head is detachable and is cast with exhaust and intake manifolds integral. This type cylinder head requires no complicated bolted-on intake and exhaust manifolds with their numerous gaskets to leak and cause faulty carburetion or let exhaust gases escape into the boat. All moving parts including overhead valve mechanism and reverse gear are lubricated by a pressure feed system. Bosch magneto and Paragon reverse gear are standard equipment.

Complete specifications on all models sent upon request.

FRISBIE MOTOR CO.

7 College Street — Middletown, Conn., U. S. A.

America's Leading Marine Engine Builders

(*Continued from page 222*)

Packard Motor Car Company
Detroit, Mich.

PACKARD

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
1M-268	45	3¾x5	6	4	1800	625	Full press.	Paragon	Dyneto	Delco		Zenith
1M-357	60	3⅝x5	8	4	1800	790	Full press.	Paragon	Dyneto	Delco		Zenith
1M-621	275	5⅝x4-9/16	6	4	2500	875	Full press.	Joe's	Bijur	Delco		Stromberg
1M-1242	550	5⅝x4-9/16	12	4	2500	1140	Full press.	Joe's	Bijur	Delco		Stromberg
2M-1551	275	6⅜x7½	6	4	1400	1690	Full press.	Joe's	Bijur	Delco		Zenith

Palmer Bros. Engines, Inc.
Cos Cob, Conn.

PALMER

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight
YT	2	3 x3½	1	4	1000	98	F6	60	6½x8	6	4	400	3[illegible]
YT2	5	3 x3½	2	4	1000	210	NK2	25	7½x10	2	4	400	3[illegible]
NL1	3½	4½x4½	1	4	600	350	NK3	35	7½x10	3	4	400	3[illegible]
NL2	7	4½x4½	2	4	600	500	NK4	50	7½x10	4	4	400	4[illegible]
RW1	6½	5½x6	1	4	600	425	NK6	80	7½x10	6	4	400	5[illegible]
NR1	6	5 x6	1	4	600	400	C	4	4½x4½	1	2	450	2[illegible]
NR2	12	5 x6	2	4	600	750	D	6	5 x6	1	2	400	2[illegible]
NR3	18	5 x6	3	4	600	1000	Q1	2½	3¼x3½	1	2	500	1[illegible]
NR4	24	5 x6	4	4	600	1250	Q2	5	3¼x3½	2	2	700	1[illegible]
F2	18	6½x8	2	4	400	1600	VH	14	3 x4½	4	4	1200	7[illegible]
F3	26	6½x8	3	4	400	2000	VHL	20	3½x4½	4	4	1200	7[illegible]
F4	35	6½x8	4	4	400	2400							

Peerless Marine Motor Corp.
2150 Niagara Street, Buffalo, N. Y.

PEERLESS

Model	Type	Horse power	No. of cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition	Carburetor
Medium duty	Valve-in-the-head	50-100	4	4	600-1200	1200	Full pressure	Joes	Leece-Neville	Atwater-Kent	Schebler
Medium duty	Valve-in-the-head	75-150	6	4	600-1200	1500	Full pressure	Joes	Leece-Neville	Atwater-Kent	Schebler
Semi-high speed	Valve-in-the-head	115	4	4	1500	1000	Full pressure	Joes	Leece-Neville	Atwater-Kent	Schebler
Semi-high speed	Valve-in-the-head	175	6	4	1500	1250	Full pressure	Joes	Leece-Neville	Atwater-Kent	Schebler

Peru Model Engine Company, Inc.
Butler, Pa.

MODEL

Model	Horse Power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse Gear	Starting Device	Ignition System	Spark plugs	Carburetor
	12-18	3⅛x4½	4	4	800-1500	375	Force Feed					
	25-40	4½x6	4	4	500-1000	950	Force Feed					
	40-60	5½x7	4	4	500-1000	1500	Force Feed					

Red Wing Motor Co.
Red Wing, Minn.

THOROBRED

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
K	5	3¼x4¼	1	4	800	230	Splash and force.			Bosch magneto	A. C.	Schebler
KK	8	3¼x4¼	2	4	800	420	Splash and force.	Paragon	Simms	Bosch magneto	A. C.	Schebler
D	14	2¾x4	4	4	1400	I 340 A 264	Splash and force.	Joes	Simms	Atwater-Kent or Bosch Magneto.	A. C.	Schebler
AA	24	3¼x4¼	4	4	1200	I 630 A 520	Splash and force.	Paragon	Bosch	Bosch magneto	A. C.	Schebler
F	36	4 1/16x5	4	4	1400	I 845 A 650	Pressure	Paragon	Bosch	Bosch magneto	A. C.	Schebler
B	40	4½x5	4	4	1400	I 865 A 670	Pressure	Paragon	Bosch	Bosch magneto	A. C.	Schebler
Red Top	50	4½x5	4	4	1800	650	Pressure	Paragon	Bosch	Dual spark	A. C.	Schebler
Big Chief	60	5x7	4	4	1200	I 1700 A 1300	Pressure	Paragon	Leece-Neville. or Bosch	Bosch magneto and distributor.	A. C.	Schebler
Big Chief Special.	90	5¾x7	4	4	1200	I 1800 A 1400	Pressure	Paragon	Leece-Neville. or Bosch	Bosch magneto and distributor.	A. C.	Schebler
Big Chief 6	110	5x7	6	4	1000	I 2400 A 1700	Pressure	Paragon	Leece-Neville.	Bosch magneto and distributor.	A. C.	Schebler
B. C. S. 6	150	5¾x7	6	4	1000	I 2450 A 1750	Pressure	Paragon	Leece-Neville.	Bosch magneto and distributor.	A. C.	Schebler

Regal Gasoline Engine Co.
Coldwater, Mich.

REGAL

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Ignition system
Y	2	3¼x3½	1	4	800	130	Pump	Johnson	Timer
FA	4	4x4½	1	4	800	290	Pump	Paragon	Timer
HA	5	4¼x5½	1	4	600	400	Pump	Paragon	Timer
EA	7	5¼x6½	1	4	550	610	Pump	Paragon	Timer
JA	9	6½x7	1	4	400	1000	McCord	Paragon	Timer
NB	8	4x4½	2	4	800	540	Oil pump	Paragon	Timer
UB	10	4½x5½	2	4	600	730	McCord	Paragon	Timer
EB	14	5¼x6½	2	4	550	1040	McCord	Paragon	Timer
LB	20	6½x8	2	4	450	1835	Pump	Paragon	Timer
FC	16	4x4½	4	4	800	730	McCord	Paragon	Timer
UC	20	4½x5½	4	4	600	1035	McCord	Paragon	Timer
EC	30	5¼x6½	4	4	550	1600	McCord	Paragon	Timer
CB	32	4½x5½	4	4	1000	910	Pump	Paragon	
JD	27	6½x7	3	4	4000	2500	McCord	Paragon	Timer
LC	40	6½x8	4	4	400	2800	Pump	Paragon	Timer
SC	50	7½x9	4	4	400	4600	McCord	Paragon	Timer
SH	100	7½x9	8	4	400	8600	McCord	Paragon	Timer

Roberts Motors
131 Arthur Street, Sandusky, Ohio

ROBERTS

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plug	Carburetor
A	35	4 x5	4	4	1500	480	Force feed	Paragon	Own	Atwater-Kent	A. C.	Schebler
R	20	3-25/32x4	4	4	1000	250	Force feed	Paragon	Own	Atwater-Kent	A. C.	Schebler
J	16	3¼ x4	4	4	1000	285	Force feed	Paragon	Own	Atwater-Kent	A. C.	Schebler

(*Continued on page 270*)

Dependability—

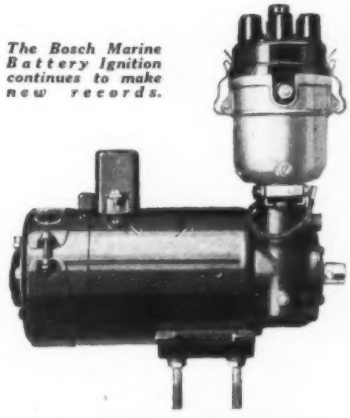
Men of the water leave no question in your mind when they discuss marine electrical equipment. They tell you to have Bosch Equipment if you want real dependability.

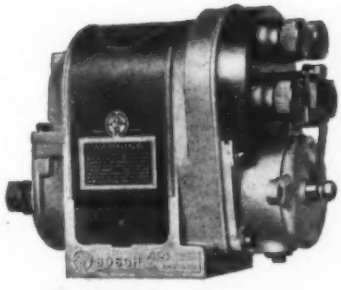
From the owner of the cruiser or the man in the trawler, the story is the same — Bosch is dependable.

Boat builders and engine makers know that "Bosch Equipped" is one of their strongest arguments.

When you overhaul your present equipment or give out new specifications be sure of dependability by specifying Bosch Marine Equipment—Starting, Lighting, Magneto and Battery Ignition.

The Bosch Marine Battery Ignition continues to make new records.





The Bosch Magneto is famous in all waters of the world.

AMERICAN BOSCH MAGNETO CORPORATION

Main Office and Works: Springfield, Mass.

Branches: New York, Chicago, Detroit, San Francisco

BOSCH

GLOBE

MARINE ENGINE

Absolute Reliability

THE DETROIT NEWS, SUNDAY, DECEMBER 13, 1925
25 Years Ago this Week
From The Detroit News of December, 1900
DEC. 15.
ONE of the largest gasoline yachts on fresh water is now in course of construction at Oades' shipyard and is to be ready for launching by the opening of navigation. It is being built under the direction of Joseph Robarge, once foreman of Oades' but for some time past engaged in the ship-building business in New York City. Walter H. Oades, owner of the shipyard, and C. H. Lawrence, formerly owner of the burned yacht, Roberta, are each half owners of the new boat, the former supplying the hull and the latter the engine.
The new boat will be 66 feet keel, 11 feet beam and 5 feet deep, so it will be seen that she will be something of a whaleboat among gasoline boats in these parts. She will be built essentially for comfort and her owners do not expect that she will make more than 12 miles an hour; but no expense will be spared in fitting up the interior with all the conveniences for long cruises. There will be cabins forward and aft, a private room fitted up in all the luxury of a parlor at home, kitchen, dining room and berths complete.
The engine will be 35 horsepower with four cylinders, manufactured at the Pennsylvania Iron Works and known as the Globe engine. The double engine will cost $2,600 alone and will be the largest engine of its kind ever run by gasoline. The company that ... takes up no more space than a steam engine and boiler for a craft size of the new boat. The boat with gasoline engine will not be under the necessity of going government inspection, and this is another point in favor of gasoline rather than steam for the purposes of propulsion.
...EARING HIGHWAYS

Compare the 35 H.P. Globe of 1900 with the 3000 H.P. motors in Yankee Doodle shown below.

HIGH SPEED
500 H. P.
2000 R.P.M.
1500 LBS.
Completely Enclosed

THE new Globe 12 cylinder V type, twin six marine engine is born of one of the oldest and most reliable gasoline engines ever built. Note the clipping from the Detroit News of 25 years ago. The new Globe has every advantage ever devised for the perfection of engine performance and stands today as the last word in high speed marine motors.

JOHNSON MOTOR PRODUCTS, INC.
518-522 West 57th St.
New York, U. S. A.

See the New Globe at the Motor Boat Show Space "O"

Advertising Index will be found on page 384

Johnson Motor Products, Inc.

Announces the New

CHRYSLER

The Motor Without a Vibration Period

100 H. P. at 3400 R. P. M.

Six Cylinders, 300 cu. in Piston Displacement

Weight 600 lbs.

THE new CHRYSLER marine motor excels any other engine of its class in efficiency, smoothness, quietness and flexibility. It is durable and dependable to the *n*th degree.

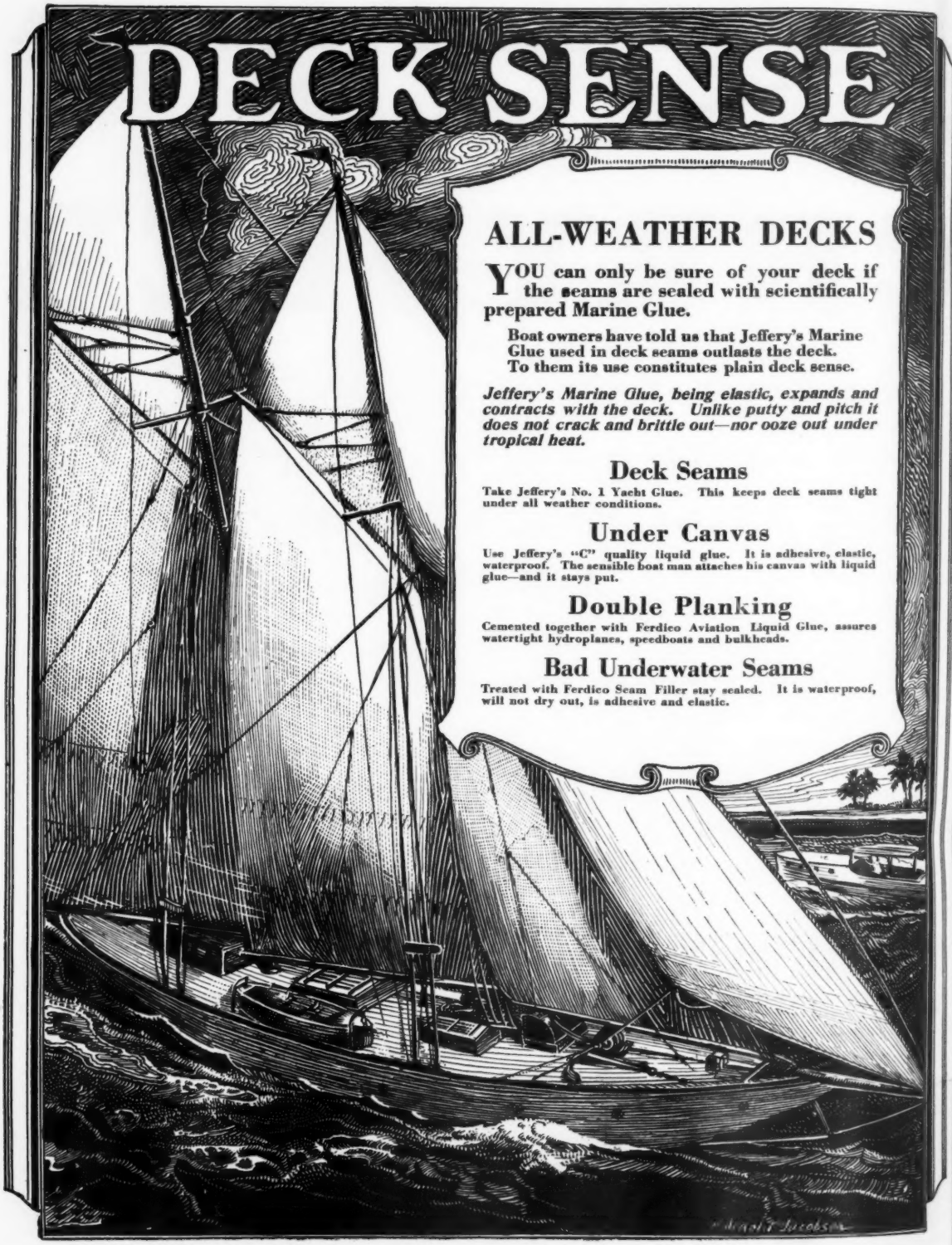
Now in Production—Deliveries April 1st.

Write for further details

JOHNSON MOTOR PRODUCTS, INC.

518-522 West 57th Street **New York, U. S. A.**

DECK SENSE



ALL-WEATHER DECKS

YOU can only be sure of your deck if the seams are sealed with scientifically prepared Marine Glue.

Boat owners have told us that Jeffery's Marine Glue used in deck seams outlasts the deck. To them its use constitutes plain deck sense.

Jeffery's Marine Glue, being elastic, expands and contracts with the deck. Unlike putty and pitch it does not crack and brittle out—nor ooze out under tropical heat.

Deck Seams

Take Jeffery's No. 1 Yacht Glue. This keeps deck seams tight under all weather conditions.

Under Canvas

Use Jeffery's "C" quality liquid glue. It is adhesive, elastic, waterproof. The sensible boat man attaches his canvas with liquid glue—and it stays put.

Double Planking

Cemented together with Ferdico Aviation Liquid Glue, assures watertight hydroplanes, speedboats and bulkheads.

Bad Underwater Seams

Treated with Ferdico Seam Filler stay sealed. It is waterproof, will not dry out, is adhesive and elastic.

SOLD BY MARINE SUPPLY STORES AND SHIP CHANDLERS EVERYWHERE

INFORMATION BOOKLETS ON REQUEST

Ferdico

L.W. Ferdinand & Co.

JEFFERY'S MARINE GLUE

152 Kneeland Street, Boston, Mass.

Advertising Index will be found on page 384

Richardson BOATS

The Winslow, designed, Richardson-built sixteen-foot Marconi Sloop, for yacht club one design class racing. Accommodations for four persons for day sailing. Several prominent clubs have a fleet of these boats. Price $600.00.

Announces for 1926

a Double Cockpit Runabout

26' x 6' 9", seating eight passengers.
Speed 28 miles per hour.

a Thirty-Four Foot Cruiser

Twin screw. A complete home afloat.

a Sixteen Foot Marconi Sloop

Designed for yacht club one design class racing.

and Many Improvements on the Richardson Standard Cruiser

THE house of Richardson, the home of skilled and honest boat builders, announces three new Richardson boats for 1926 and many new features on the famous Richardson standard cruiser. Besides their high quality and low price, Richardson boats are noted for their comfortableness, seaworthiness and the greater convenience of the interior arrangements. They are acclaimed by owners everywhere as being everything that good boats should be. Our latest models are good boats made better.

RICHARDSON BOAT CO., Inc., North Tonawanda, N.Y.

CRUISERS *AUXILIARIES* *RUNABOUTS*

Richardson BOATS

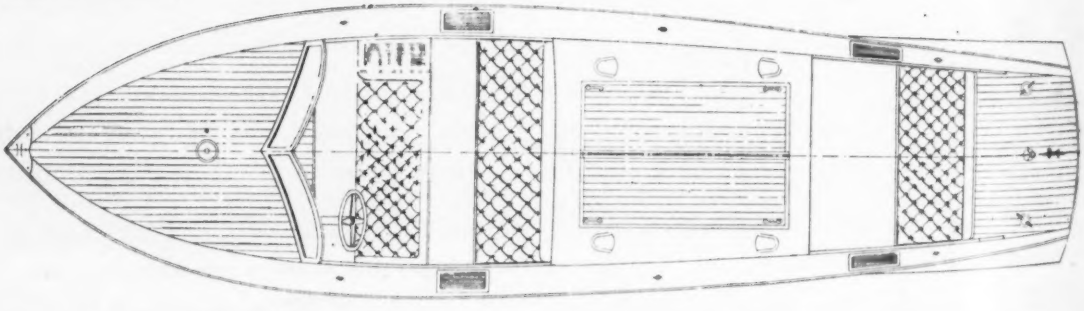
Twenty-six Foot Runabout

KERMATH Powered—100 H. P., Six Cylinders

THOSE who have seen and ridden in this twenty-six foot double cockpit runabout predict it will prove to be one of the most popular designs ever offered in a runabout. It is a good safe, and seaworthy boat powered with one of the best marine motors manufactured, the Kermath six cylinder 100 H.P. engine. When riding at full speed (twenty-eight miles per hour) the boat planes nicely and is dry, comfortable and very steady. The seating arrangement is for eight passengers. The forward cockpit seats six people and the after cockpit accommodates two persons. The seats are upholstered in rich leather cloth over deep springs and have lazy backs and side pads.

Price $3800 at North Tonawanda, N. Y.

Arrangement plan of the new twenty-six-foot Richardson Runabout.



RICHARDSON BOAT CO., Inc., North Tonawanda, N. Y.

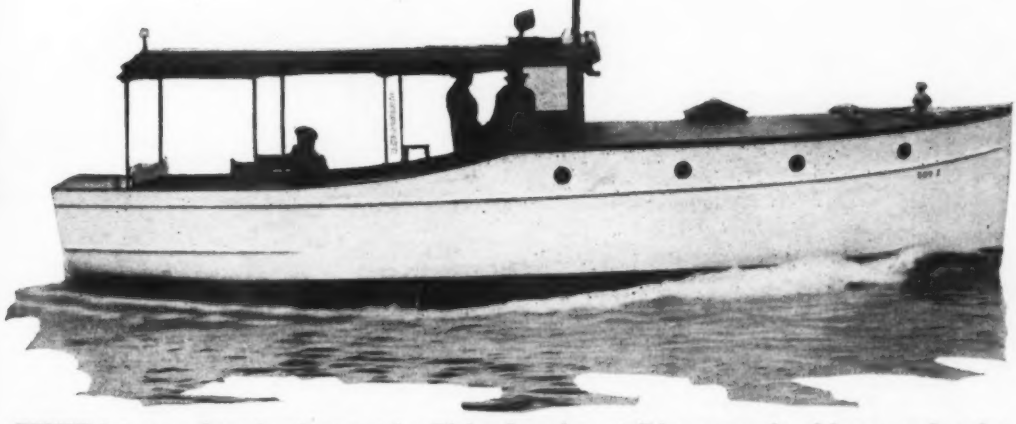
CRUISERS *AUXILIARIES* *RUNABOUTS*

Advertising Index will be found on page 384

Richardson BOATS

Thirty-Four Foot Cruiser

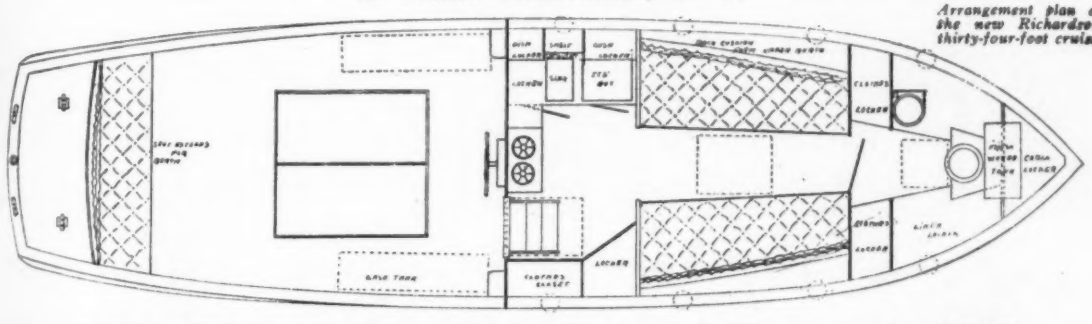
GRAY or KERMATH Powered



THE latest cruiser development by Richardson is a striking example of how much value per dollar can really be put into a boat. Thirty-four feet in length with a nine foot beam and an excellent arrangement of accommodations. It gives you more room than most boats of equal size. It is fully equipped with every essential. Sleeps four people in the cabin; the spring berths are upholstered in handsome velour and are Kapok filled. A fifth person can be accommodated with sleeping quarters in the cockpit; the six foot four inch cushioned transom seat extends forward making a comfortable berth for the extra over night guest. Plenty of locker space is provided and the lavatory has a wash basin and additional clothes lockers. The galley is completely furnished with ice box, sink, two burner stove, dish racks and cupboards.

You have a choice of power plants: A pair of Gray four cylinder 25 H.P. engines giving a speed of 12 miles per hour for the twin or a single Kermath four cylinder 35 H.P. engine giving a speed of 10 miles per hour are standard equipment.

Price $6000 Gray powered and $5200 Kermath powered at North Tonawanda, N. Y.



Arrangement plan of the new Richardson thirty-four-foot cruiser

RICHARDSON BOAT CO., Inc., North Tonawanda, N. Y.

CRUISERS AUXILIARIES RUNABOUTS

Richardson BOATS

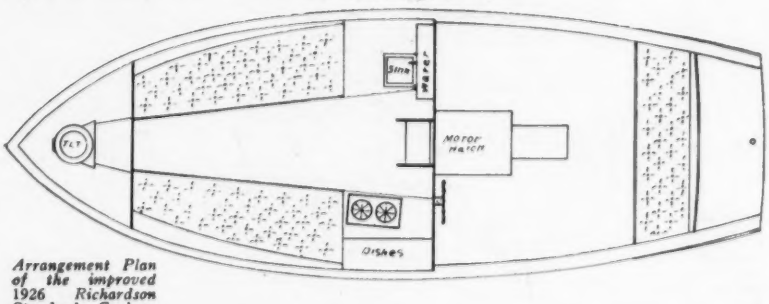
The Improved Richardson Standard Cruiser

Gray Powered

$1750 Complete. Ready to Run.

THE 1926 Richardson Standard Cruiser selling at the lowest price of any completely equipped new cruiser in its size and quality class gives the most boat value for the least money of any on the market today. It is a good, seaworthy and substantially constructed boat with full accommodations to comfortably provide for four people on an extended cruise. Twenty-three feet in length, it is as roomy as many of the thirty footers. The cabin has five feet six inches head room and with a raised trunk the head room is six feet.

The extraordinary value you get in this boat is almost unbelievable. Yet, nothing is skimped. Point for point, it is designed and built to outlast boats costing more than double its price. The Gray Model Z four cylinder, 22 H.P. marine engine is regular equipment and gives a speed of 9 miles per hour.



Arrangement Plan of the improved 1926 Richardson Standard Cruiser.

Richardson Boat Co.
Inc.
North Tonawanda, N.Y.

CRUISERS
AUXILIARIES
RUNABOUTS

Advertising Index will be found on page 384

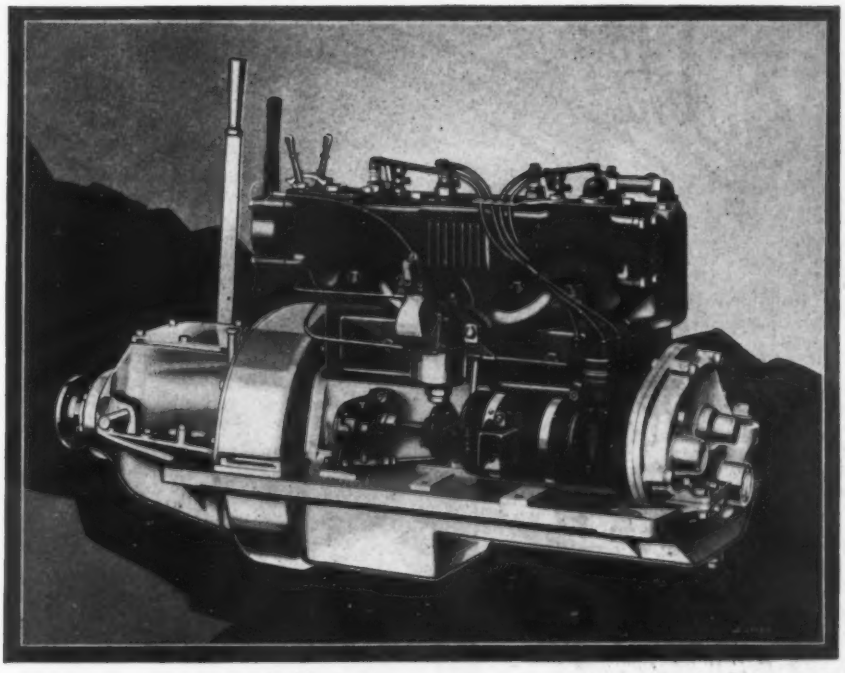
Gray Motors

Good Since 1906

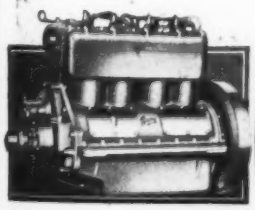
Model Z

14-25 H. P.

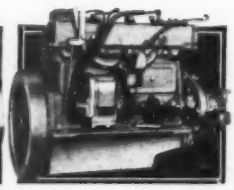
Price $260 to $440



Model "Z" is the shortest, lightest, cleanest, lowest priced, completely equipped, electric started engine in its power class today. 63% of the surface is aluminum; iron base optional; Paragon gear; weight 388 pounds; length 38½". Extreme depth below supports 6⅛"; large crakshaft; 14-25 H.P. at 225-2,200 R.P.M.



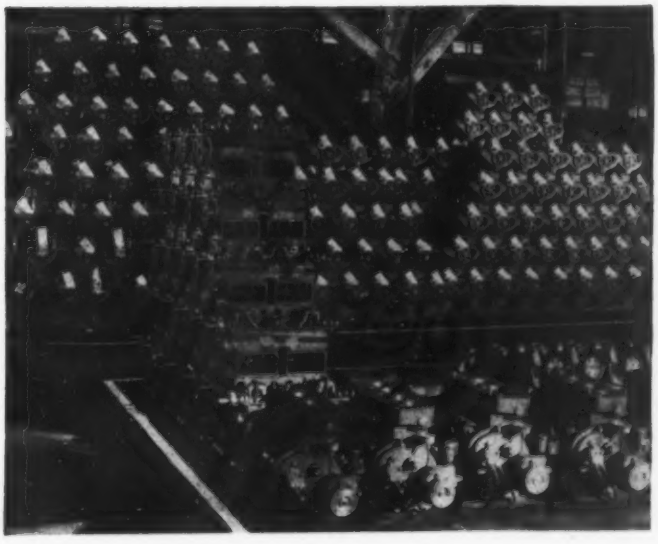
Model "ZB" with generator $260, including battery and propeller. Note large rear bearing; stuffing box, hand hole plates.



Model "ZB" with Bosch Magneto Impulse Coupling $285, with propeller.

Model "ZB" uses identically the same engine parts as Model "Z" but reverse gear is separate and cannot be built-in. Electric starter is not supplied.

THE vast facilities of the Gray factory are working at peak load in filling advance orders for spring delivery of the famous Model "Z" Gray. The photograph at the right is but a glimpse of the assembly room, where the various parts come together and take the shape of the most widely used marine engine in the world. The day this photograph was taken more than 600 Model "Z" Grays were in the factory in various stages of completion. This does not include the other Gray models nor the 200 model "Z" orders we have on hand for the Richardson 23-foot standard cruiser, the Elco Twenty-six and other orders from stock boat builders for future delivery.



The GRAY Line for 1926—See the Following Pages

Gray

VALUE + PLUS MARINE MOTORS

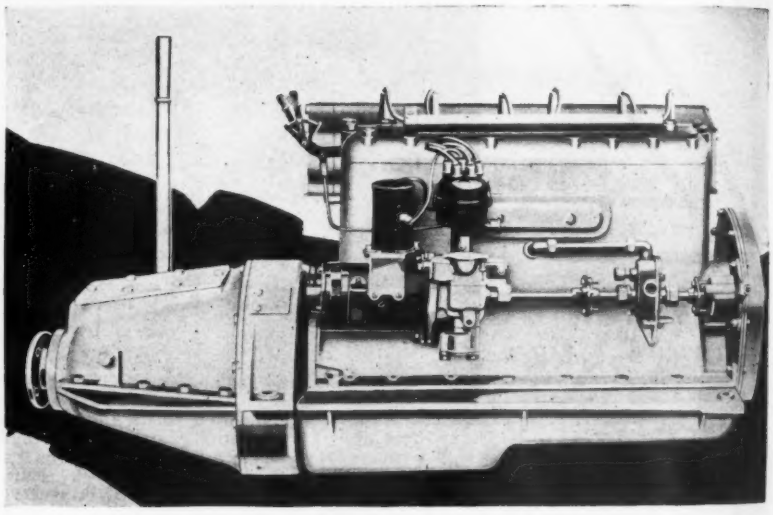
Six

Model Z 6
50 H. P.
Model A6
75 H. P.

The new Gray Six

Model "Z6": 50 H.P. Bore, 3⅜". Stroke, 4½". Weight, 635 lbs. 300 to 2000 R.P.M. Crankshaft is 2" in diameter. Equipment includes starter and generator, battery, Paragon gear. Price $895. F. O. B. Detroit.

Model "A6": 75 H.P. Bore, 3⅞". Stroke, 5". Weight, 785 lbs. Crankshaft is 2½" in diameter. Connecting rods are 11¼" long. Equipment includes electric starter, generator, battery. Price $1,285. F. O. B. Detroit.



It's a Real Pleasure to Go Cruising With a Gray

FROM the very beginning Gray engines have been conceived and designed by engineers who are motor boating fans; and ever since the manufacture of the first Gray engines in 1906, new developments and further refinements, have been under the direct supervision of engineers who know the power requirements of boats from the practical side.

Get the Facts on GRAY Value + Plus Motors for 1926

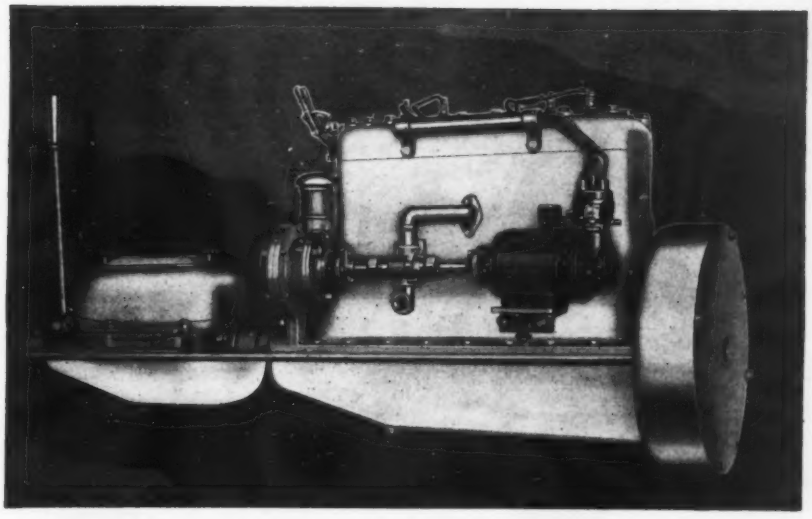
Z Model 14-25 H.P. | V Model 25-35 H.P. | Z6 Model 50 H.P. | A6 Model 75 H.P.

GRAY MARINE MOTOR CO., 6910 Lafayette Avenue East at Canton, Detroit, Mich.

Advertising Index will be found on page 384

Gray
VALUE + PLUS MARINE MOTORS

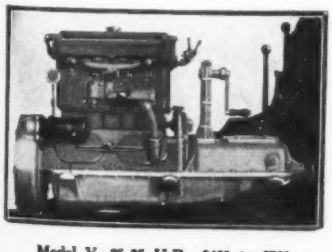
Model
50
50 H. P.



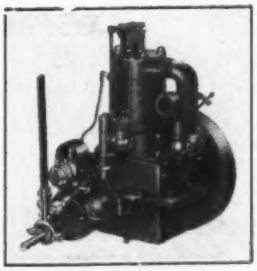
Gray model 50, sturdy, staunch, and accessible, is an all enclosed power plant with a self contained reverse gear. It develops 50 H.P. at 2000 R.P.M. 4" bore, 5" stroke, 790 lbs., force feed lubrication. Standard equipment includes Joes gear, Bosch ignition. $525 to $675 F. O. B. Detroit.

Over Sixty Thousand Satisfied Owners

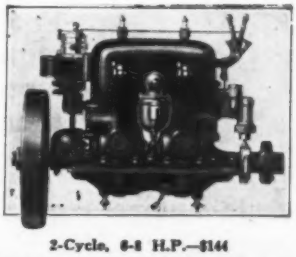
THROUGHOUT the world you will find Gray owners. There are more than sixty thousand Gray owners. Many of them are not first time owners. —their present Gray is their second or third and even fourth. Many are operating a fleet of Gray powered boats. The boats that these sixty and some odd thousand Gray owners use represent every conceivable type of motor boat in many and varied services. There is no doubt in anyone's mind about the suitableness of Gray power for his boat. There are many hundreds of successful Gray installations in boats just like yours or the one you will buy. Let us give you the facts.



Model V—25-35 H.P.—$460 to $720
Bore 3½", stroke 5", weight 550 pounds, pressure lubricated for boats up to 40 feet. Used by the United States Government. Write for new catalog just off the press.



Model "O"—$99 to $135
Model "O"—4-5 H.P. valve-in-head 4 cycle. Magneto equipped. 3¾" x 4½" 1,000 R.P.M., 165 pounds.
Kerosene or Gasoline.



2-Cycle, 6-8 H.P.—$144
Model "U"—popular since 1912. Redesigned for higher power, and smoothest running. For 14-22 footers, speeds up to 15 miles.

Get the Facts on GRAY Value + Plus Motors for 1926

50 Model 50 H.P. | O Model 4-5 H.P. | U Model 6-8 H.P. | Z 8 Model 14-25 H.P.

GRAY MARINE MOTOR CO., 6910 Lafayette Avenue East at Canton, Detroit, Mich.

When writing to advertisers please mention MOTOR BOATING, the National Magazine of Motor Boating, 119 West 40th Street, New York

Auto-Lite

Starting, Lighting and Ignition

Auto-Lite is standard equipment on Gray Marine Engines, exclusively.

This fact proves conclusively the unexcelled excellence and dependability of Auto-Lite for marine starting, lighting and ignition.

Fourteen years' experience supplying highest quality electrical systems for motor cars and trucks qualifies Auto-Lite to meet all marine requirements.

Auto Engine Works
Chris Smith & Sons
Niagara Motors
Erd Motors
Dodge Boat Works
and others

We will be glad to have our engineers call upon you and work out equipment adapted to your specifications.

THE ELECTRIC AUTO-LITE COMPANY
Office and Works: Toledo, Ohio

Advertising Index will be found on page 384

Biscayne Babies

Available from Stock *for* Immediate Delivery

YOU can now own one of these fast eighteen foot runabouts, combining thrilling speed, moderate cost and real utility for all runabout service. They are constructed by the original designers and builders of the first Biscayne Babies, ten of which raced at the 1925 Miami Beach Regatta and ten others participated in the Manhasset Bay Regatta last summer, attracting widespread attention.

Powered with 100 H.P., six cylinder, Scripps motors, Biscayne Babies give a speed of 40 miles or better. They are staunchly constructed of the finest of materials, mahogany planked and salt water equipped. The newest model has a flush deck. Your Biscayne Baby is ready and can be shipped immediately via rail or boat to any point in the United States. Price $2,800 complete.

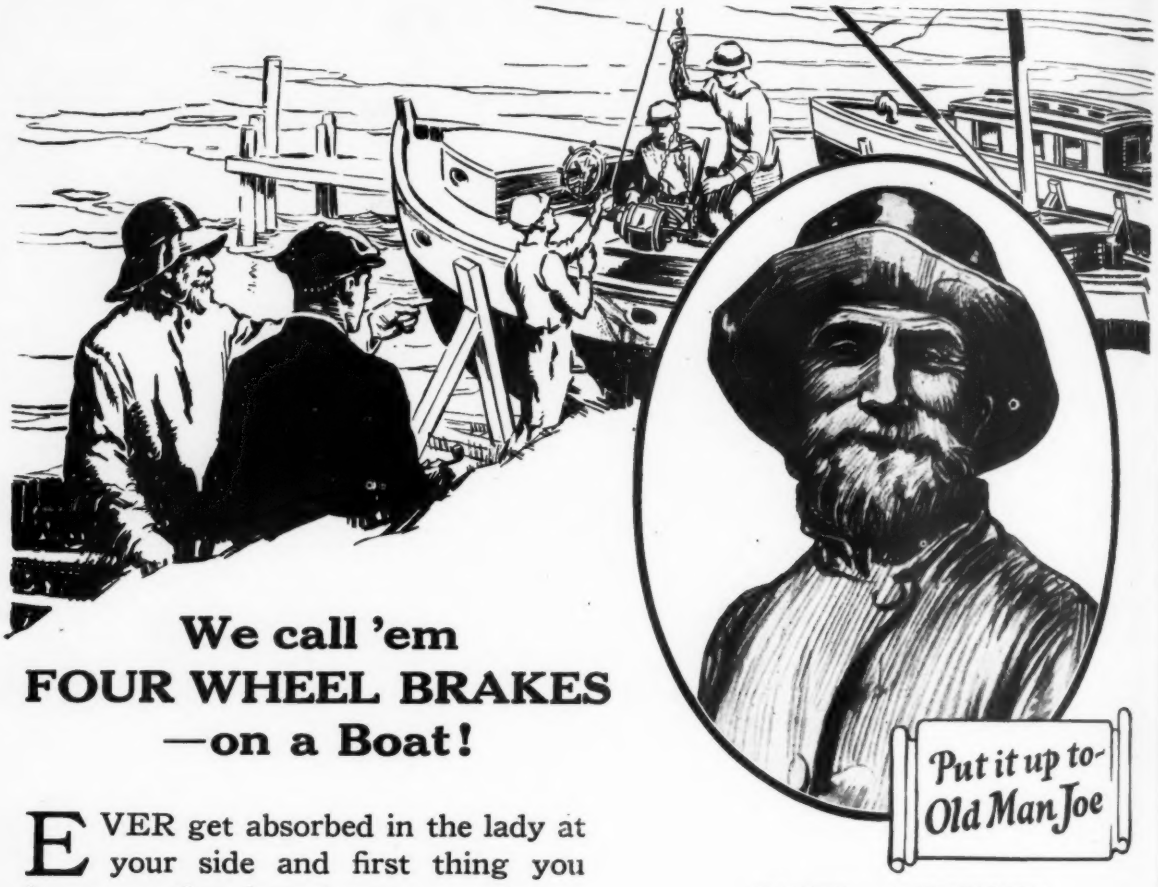
Write or wire for further details

PURDY BOAT COMPANY

Designers and Builders of High Grade Motor Craft

PORT WASHINGTON LONG ISLAND

A section of the Biscayne Baby, one design class, race at the Manhasset Bay Regatta, August, 1925. The new model does not have the raised hatch, the deck is flush.



We call 'em FOUR WHEEL BRAKES —on a Boat!

EVER get absorbed in the lady at your side and first thing you know another boat looms up athwart your path only a few yards off?

Man, then's when Joes Gear, with its high reverse ratio, acts like a 4-wheel brake with balloon tires! Right there, in the bat of an eye, you've saved your reputation (and perhaps other damages)—all because you chose a gear that could think quick in a pinch!

Besides, of course, a high reverse, always under instant control like Joes, is the handiest, safest thing in the world for getting around and maneuvering your boat under all circumstances. There's a rockin' chair feeling of security about it that just about doubles the fun of boating.

SALES and SERVICE:

New York, N. Y.—Sutter Bros., 44 Third Ave.; Service Station, foot E. 92nd St., Brooklyn.
Boston, Mass.—Gray-Aldrich Co., Inc., 6 Commercial Wharf.
Philadelphia, Pa.—W. E. Gochenaur Mfg. Co., 631 Arch St.
Baltimore, Md.—Unger & Mahon, Inc., Pratt and Gay Sts.
Norfolk, Va.—Gas Engine & Boat Corp., First St.
Mobile, Ala.—Marine Supply Co.
New Orleans, La.—Arthur Duvic's Sons, 130 Chartres St.
Galveston, Tex.—Galveston Marine Supply Co., 2007 Strand.
Wilmington, Calif.—Fellows & Stewart, Inc.
San Francisco, Calif.—Johnson, Joseph and G. M. Josselyn & Co., 50 Sacramento St.
Portland, Ore.—Oregon Marine & Fisheries Supply Co., 105 First St.
Seattle, Wash.—Pacific Marine Engine Co., 906 Western Ave.
Vancouver, B. C., Canada—Hoffar Marine Constr. Co., 1969 Georgia St., W.
Chicago, Ill.—W. L. Masters & Co., 800 N. Clark St.
St. Louis, Mo.—William Groesmann Boat & Motor Co., 1630 Pine St.
Detroit, Mich.—Henry H. Smith & Co., 334 Jefferson Ave., E.
Lakewood, Ohio—William F. Meier, 1220 Warren Road.
Clayton, N. Y.—St. Lawrence River Motor & Machine Co.
Rochester, N. Y.—Volney E. Lacy, Charlotte Station.
Toronto, Canada—A. R. Williams Machinery Co., 66 Front St.
N. B., Canada—T. McAvity & Sons Ltd., 67 Water St., St. John.
Newfoundland, Canada—John Barron & Son, 241 Water St., St. John's.
Canada—Canadian Fairbanks Morse Co., All Branches.
Buenos Aires, Argentina, S. A.—Jose Barham & Sons, Peru 362.
England—J. King & Co., 10 Church Row, Limehouse, E. London.
Rotterdam, Holland—Fred J. Kemper.
New York, N. Y. (Australasia)—Melchior, Armstrong, Dessau Co., 119 Broad St.
England—J. King & Co., 10 Church Row, Limehouse, E., London.

See us at the Motor Boat Show, Booth 71 Mezzanine

The SNOW & PETRELLI MFG. CO.
Main Office and Plant:
154B BREWERY STREET, NEW HAVEN, CONN.

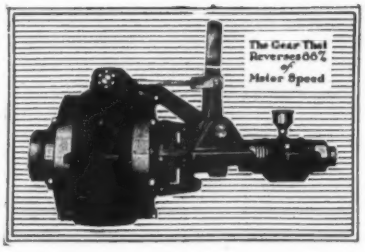
JOES -FAMOUS REVERSE- GEARS

REVERSE 80%-88% OF MOTOR SPEED

Advertising Index will be found on page 384

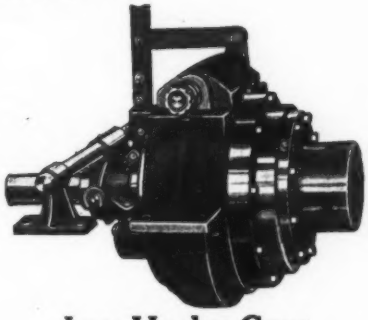
Put it up to Old Man Joe

—at the MOTOR BOAT SHOW, Booth 71 Mezzanine



Joes Duplex Drive Gears

Adopted by engine and boat builders as standard equipment. Will reverse the boat from full speed ahead to full speed astern (an 88% reverse), without stalling. Made only in the yoke shifting type. Carried in stock by Joes dealers. No. 143 is our most famous direct drive racing model—a gear that has won laurels in practically all the big speed contests for the past ten years.



Joes Husky Gear

For diesel and semi-diesel and all big oil burning engines. Built like a locomotive. Gives long, continuous service under heavy, gruelling duty. Direct drive. Reverses 85% of engine speed. A splendid gear for house boats, tug boats, work boats and cruisers.

Joes High Power Gear

Primarily for small, high-speed motors, but is suitable for all motors within the range of their power. Used by numerous motor manufacturers to enclose in oil-tight housings. Either central lever or yoke operating. Moderately priced.

Joes One-Way Clutches

For fishing boats and other small craft where a dry disc cut-out clutch will fill the bill. Transmits up to 3 H.P. per 100 R.P.M. Then there is Joes Famous One-Way Multiple Disc Clutch for hydroplanes and other speed boats. It can be thrown in gradually from an absolute neutral. This is a high-class, finely-adjusted clutch.

Hartmann Universal Joint

Strongest, longest-lived joint it is possible to make. Very large bearings and bushings, tapered and provided with a simple adjustment to take up wear. Easy to lubricate. Will not heat up under high speed or heavy loads. All sizes for racing and general use.

Joes Rear and Thrust Bearings

Complete rear bearings with grooved and banded ball thrusts and collars, in one or both directions. Highest quality balls in an assembly especially adapted for propeller thrust.

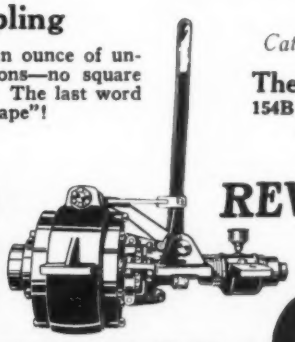
Joes "Ship-Shape" Coupling

An exceptionally strong coupling without an ounce of unnecessary metal. Sunken bolts—no projections—no square corners—nothing to catch or cause accidents. The last word in compact neatness; hence its name, "ship-shape"!

Catalogs of any of Joes Products on request.

The SNOW & PETRELLI MFG. CO.
154B BREWERY STREET, NEW HAVEN, CONN.

JOES



REVERSE 80%-88% OF MOTOR SPEED

-FAMOUS REVERSE- GEARS

America's Leading Marine Engine Builders

(*Continued from page 254*)

Remington Oil Engine, Inc.
Keyport, N. J.

REMINGTON

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system
Heavy	4	3⅞x5	1	2	700	550	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.
Heavy	12	7 x8	1	2	400	1500	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.
Heavy	17	8¾x8	1	2	400	1600	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.
Heavy	24	7 x8	2	2	400	2100	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.
Heavy	35	8¾x8	2	2	400	3130	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.
Heavy	55	8¾x8	3	2	400	4500	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.
Heavy	75	8¾x8	4	2	400	5430	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.
Light	8	5½x6	1	2	500	800	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.
Light	10	6¼x6	1	2	500	825	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.
Light	16	5½x6	2	2	500	1050	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.
Light	22	6¼x6	2	2	500	1100	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.
Light	34	6¼x6	3	2	500	1850	Force Feed....	Optional.....	Air.....	Hot bulb or Elec.

Scripps Motor Company
5819 Lincoln Avenue, Detroit, Mich.

SCRIPPS

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication
D-2.....	12	4¼x6	2	4	600	525	Pressure	F-6.....	100	3¾x5	6	4	2250	750	Pressure
D-2.....	18	4¼x6	2	4	1000	525	Pressure	E-4.....	45	4½x6	4	4	1000	975	Pressure
F-4.....	40	3¾x5	4	4	1200	550	Pressure	E-4.....	70	4½x6	4	4	1600	975	Pressure
F-4.....	60	3¾x5	4	4	2000	550	Pressure	E-6.....	60	4½x6	6	4	900	1290	Pressure
F-6.....	50	3¾x5	6	4	1100	750	Pressure	E-6.....	100	4½x6	6	4	1600	1290	Pressure
G-6 (medium)	100	4¼x5¾	6	4	1200	1100	Pressure	G-6 (high)..	150	4¾x5¼	6	4	2000	1100	Pressure

Sears, Roebuck & Co.
Chicago, Philadelphia, Kansas City, Dallas, Seattle

MOTORGO

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycl	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carbureter
1925.....	2½	3¼x3¼	1	2	750	97	Splash.....	.....	.....		.....	Schebler
1925.....	4	4 x4	1	2	750	135	Splash.....	.....	.....	Battery	.....	Schebler
1925.....	6	3½x3½	2	2	750	154	Splash.....	.....	.....	or	.....	Schebler
1925.....	8	4 x4	2	2	750	222	Splash.....	.....	.....	magneto	.....	Schebler
1925.....	5	3¼x4	1	4	800	160	Force.....	.....	.....	Bosh.....	.....	Holley
1925.....	15	2¾x4	4	4	1600	325	Force.....	Joes.....	Auto Lite.....	Atwater-Kent...	.....	Zenith

Standard Motor Construction Co.
125 Pine Street, Jersey City, N. J.

STANDARD

DIESEL

Diesel	Horse power	Bore and Stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device
.....	67	8½x12	3	4	350	13,500	Pressure.....	Own.....	Air
.....	90	8½x12	4	4	350	16,000	Pressure.....	Own.....	Air
.....	67	8½x12	3	4	350	12,000	Pressure.....	Direct	Air
.....	90	8½x12	4	4	350	13,500	Pressure.....	Direct	Air
.....	135	8½x12	6	4	350	18,000	Pressure.....	Direct	Air
.....	200	10 x14	6	4	300	34,000	Pressure.....	Direct	Air
.....	300	12 x17	6	4	275	56,000	Pressure.....	Direct	Air

Standard Motor Construction Co.
178 Whiton Street, Jersey City, N. J.

STANDARD

GASOLINE

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycl	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carbureter
F1	12	5 x6½	2	4	400-450	850	McCord.....	Standard....	Bosch.....	Double.....	A.C. Titan...	Schebler
E1	18	6 x8	2	4	350-400	1200	McCord.....	Standard....	Bosch.....	Double.....	A.C. Titan...	Schebler
F3	24	5 x6½	4	4	400-450	1600	McCord.....	Standard....	Bosch.....	Double.....	A.C. Titan...	Schebler
E2	27	6 x8	3	4	350-400	1800	McCord.....	Standard....	Bosch.....	Double.....	A.C. Titan...	Schebler
E3	37	6 x8	4	4	350-400	2800	McCord.....	Standard....	Bosch.....	Double.....	A.C. Titan...	Schebler
E4	54	6 x8	6	4	350-400	3200	McCord.....	Standard....	Bosch.....	Double.....	A.C. Titan...	Schebler
HE3	60	6½x8	4	4	550-600	3300	McCord.....	Standard....	Leece-Neville ...	Double.....	A.C. Titan...	Schebler
12	75	8 x10	4	4	350-400	5300	McCord.....	Standard....	Leece-Neville ...	Double.....	A.C. Titan...	Schebler
HE4	90	6½x8	6	4	550-600	4200	McCord.....	Standard....	Leece-Neville ...	Double.....	A.C. Titan...	Schebler
1	100	8 x10	6	4	350-400	8000	McCord.....	Standard....	Leece-Neville ...	Double.....	A.C. Titan...	Schebler
N1	150	8½x11	6	4	350-400	5800	McCord.....	Standard....	Direct air reversing.	Double.....	A.C. Titan...	Schebler
N2	220	10 x11	6	4	460	6300	McCord.....	Standard....	Direct air reversing.	Double.....	A.C. Titan...	Schebler

Sterling Engine Company
1253 Niagara Street, Buffalo, N. Y.

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carbureter
*Neptune	12-15	5½x7	2	4	500	1150	Pressure..	Own.....	Northeast.	Magneto-	Champion.	Schebler
Dolphin	157	5¾x6¾	4	4	1650	1600	Pressure..	Own.....	Northeast.	Battery	Champion.	Stromberg
Dolphin	235	5¾x6¾	6	4	1650	2000	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Dolphin	300	5¾x6¾	8	4	1550	2750	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Dolphin, medium	110	5¾x6¾	4	4	1200	1700	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Dolphin, medium	165	5¾x6¾	6	4	1200	2300	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Dolphin, medium	220	5¾x6¾	8	4	1200	3150	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Trident	63	5¾x6¾	4	4	800	1875	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Trident	94	5¾x6¾	6	4	800	2550	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Trident	126	5¾x6¾	8	4	800	3150	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Dolphin, special	190	5¾x6¾	4	4	1950	1550	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Dolphin, special	290	5¾x6¾	6	4	1950	1965	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Seagull	150	4 11/16x6	6	4	1800	1375	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Viking	300	7 x8½	6	4	1200	4800	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Coast Guard	200	6¼x7¾	6	4	1200	4100	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg
Coast Guard	300	6¼x7¾	6	4	1500	3500	Pressure..	Own.....	Northeast.	.....	Champion.	Stromberg

Note* Neptune has no starter and has Schebler carbureter and KW magneto.

Sutter Brothers
44 Third Avenue, New York, N. Y.

INTERNATIONAL 16

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plug	Carbureter
16.....	16-18	3¼x4	4	4	1000-1200	290	Splash.....	Joes.....	Bosch.....	Bosch.....	Bosch.....	Schebler

(*Continued on page 286*)

HYDROGLISSEURS

DUMOND-GALVIN *(Patented)*

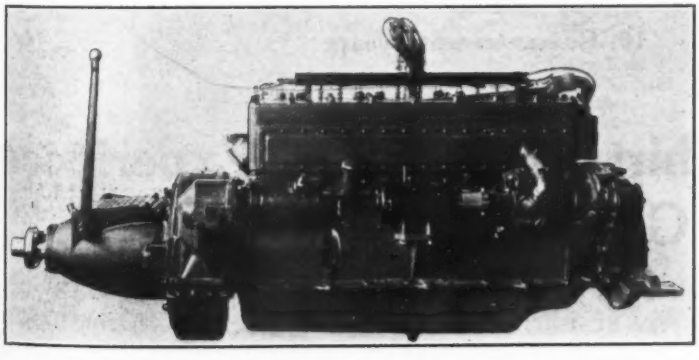
The SAFTIBOAT

FOR several years the Dumond-Galvin hydroglisseur has startled Europe in navigating at high speeds on shallow waters, rapids, weed and grass infested streams and rivers where other boats have never been known to go. The hydroglisseur or SAFTIBOAT is the only standardized air drive boat in the world. It is quietly and steadily revolutionizing the boating of those on or near shallow water. Boating in a SAFTIBOAT is cheaper, safer and more pleasurable than any other form of high speed water travel.

SAFTIBOATS are available in many models for both pleasure and commercial use, with and without cabins—2 to 75 passengers, 12 to 75 miles per hour. Draft, 2″ to 7″.

Model "B" Saftiboat at high speed. Length, 19′ 10″. Beam, 6′ 5″. Draft, 3⅞″.

LYCOMING STRAIGHT EIGHT



The Lycoming Straight Eight Marine Engine, 65 H.P. Bore, 3½″. Stroke, 4½″. Piston displacement, 276 cu. in.

YOU can now power your boat with an eight cylinder engine for less money than the cost of most four cylinder engines. The Lycoming Straight Eight is the highest development in gasoline engines. Manufacturers of the finest grade motor cars are now adopting eight cylinder motors. An eight is smoother than a six, more reliable and dependable.

We also carry for immediate delivery the four cylinder Lycoming, 40 H.P. marine engine. Bore, 4″. Stroke, 5″. Piston displacement, 250 cu. in. This engine has a five-bearing crankshaft, a feature found only on the finest four cylinder engines made.

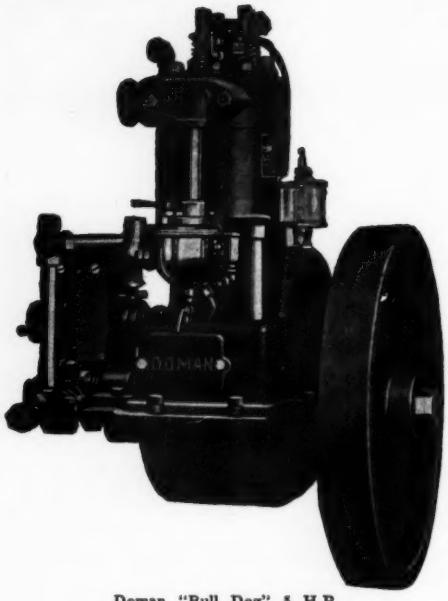
Anzani Engines, 1, 2 and 4 cylinders, high speed

BROWNBACK MOTOR LABORATORIES, Inc.

H. L. Brownback and Associates, *Sales Representatives*

17 Battery Place New York City, N. Y.

10 Reasons Why The DOMAN "BULL DOG" Is a Better Engine



Doman "Bull Dog" 5 H.P.
One cylinder, Four cycle.
Bore 3¾". Stroke 4½".

1. It is a four-cycle engine.
2. It has overhead valves.
3. Both intake and exhaust valves mechanically operated.
4. It has removable cylinder head.
5. Ball thrust bearings prevent undue wear from thrust of propellers.
6. Bearings are bronzed backed, die cast, removable and interchangeable.
7. One piece drop forged camshaft, hardened and ground.
8. Cut semi-steel gears.
9. Compact, light, and will throttle down to low speed.
10. Guaranteed five years.

The Product of Thirty-Five Years' Experience In Building Good Marine Engines

DOMAN marine motors are built on time-tested engineering principles by one of the longest established manufacturers of internal combustion engines for marine use. An enviable reputation of 35 years' standing is back of every Doman motor which leaves our factory. There are five Doman models, ranging from 4 to 50 H.P., and each represents the highest value in medium duty four-cycle marine engines.

Model K—4 H.P., 800 R.P.M., Bore 3⅜". Stroke 4½". Weight 165 lbs.
Model B—5-7 H.P., 800 R.P.M., Bore 4¼". Stroke 6". Weight 575 lbs.
Model HM2—12-15 H.P., 800 R.P.M., Bore 4¾". Stroke 6". Wgt. 750 lbs.
Model HM4—25-40 H.P., 900 R.P.M., Bore 4½". Stroke 6". Wgt. 1250 lbs.
Model TM4—50-60 H.P., 800 R.P.M., Bore 6½". Stroke 7". Wgt. 1750 lbs.

Also manufacturers of independent electric lighting plants

UNIVERSAL PRODUCTS COMPANY

DOMAN ENGINE DIVISION

OSHKOSH :-: **WISCONSIN**

Advertising Index will be found on page 384

DETROIT
As a Potential Buying Market

Not Simply Our Idea Alone

There are a growing number of advertisers who have learned the advantages of consistently advertising to one of the largest individual groups of yachtsmen in the country—all readers of the Main Sheet. This group is concentrated in one of the best potential boating markets of this country.

Nationally advertised products that are regularly advertised in the D. Y. C. Main Sheet and find that it pays.

Chris-Craft Runabouts
Lincoln Motor Cars
Gar Wood Liberty Engines
Canadian Pacific Cruises
Lovejoy Shock Absorbers
Scripps Marine Motors
Belle Isle Bear Cats
Hudson and Essex Cars
Kermath Boat Engines
Packard Automobiles
Welte-Mignon Pianos
Shell Gasoline
Hacker Dolphin Runabouts
White House Teas and Coffees
Matthews 38-foot Cruisers
Edward Smith Varnishes
Buick Automobiles
Cox & Stevens Yacht Brokers
J. C. Goss Sails
Oldsmobile Cars

Write for Space Rates in

The Main Sheet

3101 Woodward Avenue
DETROIT

HOMELITE

$195

F. O. B. Factory

Complete and ready to run

Express Cruiser "Snover"

A 45-foot bridge deck cruiser. HOMELITE operates the following: 18 cabin lights, riding lights, search-light, pump, toaster, vacuum cleaner, electric iron and water heater. Also charges the radio batteries.

The only practical light plant for your boat

YOUR boat should have an independent source of electric light and power. ***HOMELITE, the Ideal marine electric light plant, will keep the boat's batteries fully charged whether lying in port or under way;*** it will operate electrical appliances or machinery (up to ½ h.p.) and it will supply plenty of brilliant electric light at all times. It is dependable, runs on cheap fuel, is compact in design and equal in electrical output to any other plant three times its size and weight. Fully guaranteed, of course.

Auxiliary Schooner "Windjammer"

A famous 57-footer that is HOMELITE equipped. HOMELITE is standard equipment on the ALDEN boats.

Write today for free illustrated booklet "Electricity for Your Boat"

Really Portable

Specifications

Over all dimensions: Length 21", width 14", height 21".

Weight: 110 pounds. Ball Bearing throughout.

Engines: Single cylinder, two-stroke air-cooled. Carburetor, specially designed, adjustable to various types of fuel. Ignition, high tension Bosch Magneto or Bosch Battery Ignition.

Generator: Six pole, shunt wound. Output, 600 watts minimum, d.s.

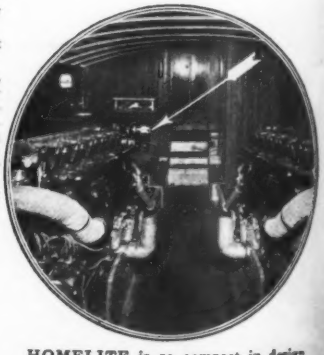
Current Control. Specially designed voltage regulator.

Voltages: 12, 32 and 110 volt models.

Operates: Without batteries, it will light 40 lights continuously or electrical appliances.

We will be pleased to arrange a free demonstration on board your boat or if you are building, ask your builder about HOMELITE. You will be interested in the booklet "Electricity for Your Boat." Address

Department B2



HOMELITE is so compact in design that it can be stowed away anywhere. For camping it can readily be carried ashore.

HOMELITE CORPORATION

Grand Central Terminal, New York

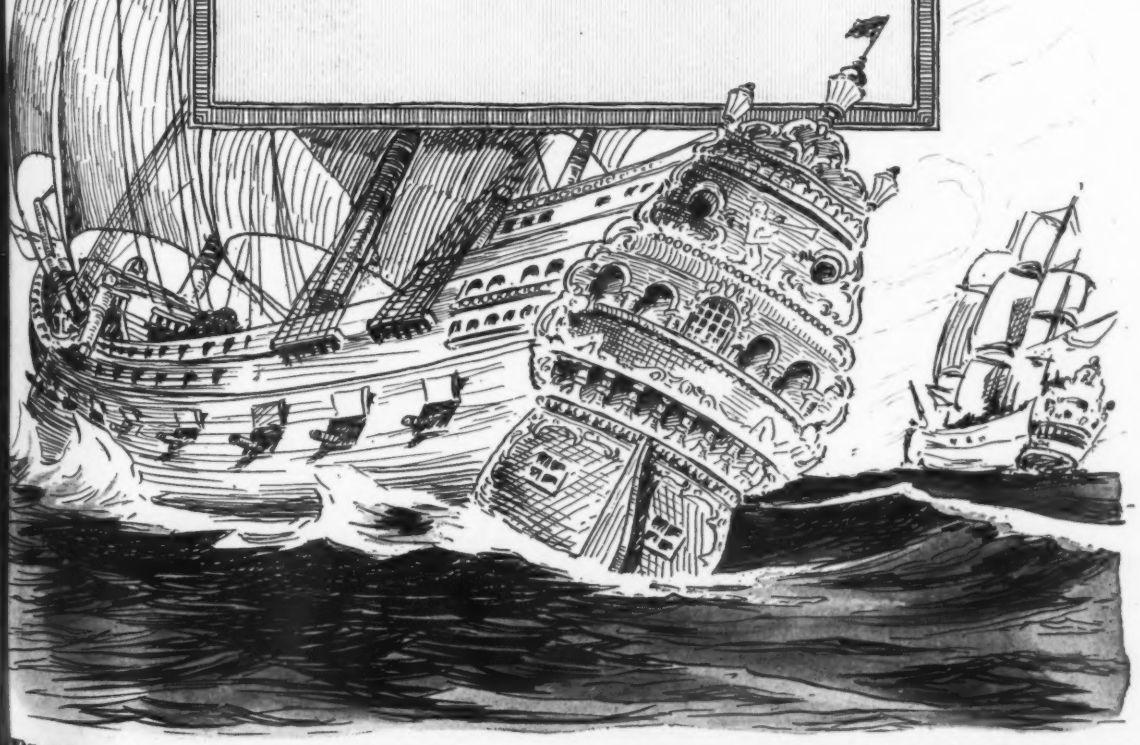
Marine Distributors

East Coast	*Great Lakes*	*Gulf Coast*	*West Coast*
Smith-Meeker Eng. Co. New York, N. Y.	Hubbard H. Erickson Co. Chicago, Ill.	So. Water Supply Co. Tampa, Fla.	Fellows & Stewart Wilmington, Cal.
Walter H. Moreton Co. Boston, Mass.	Warren F. Meier Lakewood, Cleveland, O.	Harcol Industries, Inc. New Orleans, La.	Hoffar Marine Const. Co. Vancouver, B. C.

Advertising Index will be found on page 384

Banfield

The name that is and always will be pre-eminent in the sea-skiff world



Advertising Index will be found on page 384

Thirty-Four Foot De Luxe Model Cruiser

THE De Luxe Model Cruisers are known to be the very finest Sea Skiffs built today. Yacht type finish is used throughout with workmanship and materials of the very highest quality. The cabin contains full headroom and sleeps four. Built with or without forward cockpit.

The tremendous seaworthy qualities of these boats permit them to be used for the double purpose of deep-sea fishing and cruising. Where arrangements do not suit, plans will be submitted to meet your special requirements.

Specifications

Length—34 feet.
Beam—9 feet 10 inches.
Draft—24 inches.
Keel or Bottom—White Spruce, 2 inch x 30 inch.
Deadwoods—White Oak, 5 inch.
Transom—Mahogany, 1½ inch.
Shoe—Long Leaf Yellow Pine, 5 inch.
Frames—⅞ inch x ¾ inch White Oak spaced 6 inch centers. All frames extend from Gunwale to Gunwale in one piece.
Planking—White Cedar Lap Strake, ¾ inch.
Cabin Sides—Mahogany.
Bulkheads—Clear White Pine, ¾ inch.
Ceiling—Clear White Pine, ¾ inch.
Fastenings—Copper rivets over copper burrs, heavy brass screws in plank ends, brass bolts in deadwoods and motor beds.
Hardware—Bronze and brass.
Fuel Tanks—100 gallon capacity.
Fresh Water Tank—50 gallon capacity.
Cockpit—Self-bailing.
Rudder—Bronze, machined from solid stock.
Windshield—Mahogany, built to withstand the high seas.
Cushions—Kopac filled life preserver type.
Cockpit Covering—Removable fly awning or permanent canopy top.
Stuffing Box—Special bronze, self-aligning.
Steering Wheel—Chain and sprocket.
Struts—Extra heavy bronze.
Propeller Shafting—Bronze, Hyde propeller.
Equipment—Toilet, wash basin, galley sink, stove, ice-box, mahogany cabin table, dish closet, automatic bailer, chart locker, electric cabin and running lights, horn, whistle, fog bell, two fire extinguishers, bilge pump, compass, flags and poles, anchor, rope, six life preservers, fenders, motor tools, name and license number.

Tiebout

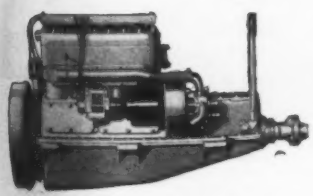
MARINE HARDWARE
Used Exclusively

HYDE PROPELLERS
Used Exclusively

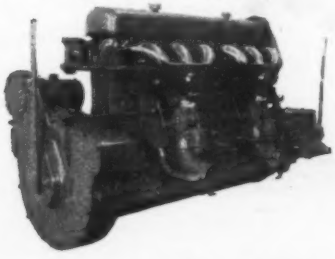
Price Complete Less Motor
$6500
F.O.B., Atlantic Highlands, N.J.

Powered with

KERMATH



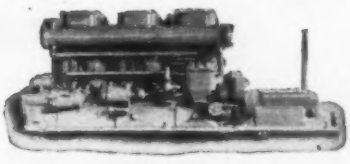
70 H.P.—TWIN SCREW
$9,200.00—Speed 18 to 20 M.P.H.



HALL-SCOTT

200 H.P.—LM6
$10,250.00—Speed 25 M.P.H.

Sterling



290 H.P.—DOLPHIN SPECIAL
$11,000.00—Speed 28 M.P.H.

The Hartford Courant

LXXXVIII. HARTFORD, CONN., WEDNESDAY, NOVEMBER 18, 1925. —24 PAGES. XX

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HARTFORD SAILOR'S LENGTHY VOYAGE IN 34 FOOT MOTORBOAT

Yachtsman Recites Details of Splendid Vacation Spent Exploring Little Known Coast.

G. G. WILLIAMS BACK FROM WILD COASTS

Seaworthy Little Gasoline Powered Craft Carries Owner Comfortably on Long Cruise.

From Noank, Connecticut, to the northernmost tip of Labrador in a 34 foot long motorboat, riding out gales, shooting caribou, fishing, exploring the grand fiords, visiting the most primitive Esquimaux and witnessing a gigantic landslide, were a few of the summer experiences of George G. Williams of No. 205 Girard avenue, veteran yachtsman and lover of the Labrador wilds. He is recently returned from his vacation north, but it is not the first of his experiences there. Frequently in years gone by Mr. Williams has cruised in his own yacht to the land of the Esquimaux; but this is the first time he or anyone else ever attempted the trip in a motorboat of comparatively small size. The little Nanu, a sea skiff dory type, proved an able little ship in all weathers. Mr. Williams has written the following account of the delightful journey:

Happy Start.

After a number of vexatious delays, making my start two weeks later than I had planned, the sea skiff Nanu left Noank, Conn., Monday, July 13 and began her twelve hundred mile voyage toward Battle Harbor, Labrador, my first objective. With a smooth sea, good time was made down to the Cape Cod canal, and at 9 p. m. the same evening we anchored in Gloucester Harbor.

The next two or three days we ran along the Massachusetts and Maine coast and Thursday the 16th found us at North East Harbor, Maine. Here a dense fog held us till the following Monday, when we ran across the Bay of Fundy to Yarmouth, N. S.; thence along the Nova Scotia coast, made familiar by many previous cruises but always interesting and delightful, to Cape Breton. The better part of a day was spent passing through the lovely Bras D'or Lakes where one could delightfully spend a month in cruising. Awaiting a favorable chance for "a good time along" as the Newfoundland and Labrador fishermen say, we headed the Nanu across Cobalt Straight to Cape Ray, the southwest point of Newfoundland, a distance of about a hundred miles, and picked up the light on the cape just at night.

Bay of Islands.

The next morning found us off the Bay of Islands, Newfoundland, and the approach of a southeaster decided us to run in there for a harbor. The beauties of this locality have ... been described, so I need not dwell on them. We spent some time inspecting and wondering at the great power development that is going on at Curling, near Humbermouth, a tremendous undertaking by English capitalists, involving millions of dollars.

Fog Shrouded Shores.

With the first favorable weather we pushed on along the three hundred mile west coast of Newfoundland, being held up frequently by fog and high wind, very prevalent in July on that coast, and especially in the straits of Belle Isle, where it seems as if the fog was never long absent.

A few days later we got our first glimpse of Labrador, and the icebergs which most all summer long drift down the Labrador coast or lie stranded on some reef or shore.

Arrive At Labrador.

August 4 found us anchored at Battle Harbor, where one of Dr. Grenfell's principal hospitals is located and where Captain MacMillan in the Bowdoin had been not so many days before us on his way to Greenland. After a short time spent renewing acquaintances with our many friends and a day's visit to a nearby salmon river, where in previous years we had had some good sport, we left "Battle," as it is familiarly called, and began our real summer's work or play, as you like.

A 1200 Mile Voyage.

From Battle Harbor, at the head of Belle Isle Straits, to Cape Chidley, the extreme northern point of Labrador, the distance is some 700 miles as the crow flies, but following all the indentations of the coast, nearer twelve hundred. It is a rugged, barren for the greater part, treeless coast, skirted by innumerable just as barren islands, the breeding place of all manner of sea birds. Mountains from a thousand feet in height to six and seven thousand rise right out of the sea, and great fiords reach back inland thirty or forty miles, equalling, I am told, those of Norway in scenic effects.

In fact, Professor Daley of Harvard, who cruised along the Labrador many years ago, states that there is nothing in all of eastern North America that surpasses parts of Labrador in the grandeur of its scenery. On this 700 miles of coast I can remember but nine lighthouses and these are maintained for the fishing schooners only from about June 1st to September 15 or a little later. There is not a buoy and ... a few beacons, the latter ... been placed through the ... ility ... Grenfell ... the f... and ... on the coast.

Exploration...

He... the ... rabor ... ast ... pr... the ... No... rel... hav... me... to ... som... ther... I ha... laid ... not ... que... more ... on t... and ... cite... ing ... anot... a ... ste... be... out ... feet. ... barre... willow ... in the swift ... river.

Encounters Gales.

Now and then we would get a "gale o' wind" that would keep us in some harbor, where with two anchors down and perhaps a line ashore, we would spend the day in reading and writing in my comfortable cabin while the wind howled outside. Wherever we anchored, if there were fishermen or Esquimaux about, we were sure of plenty of visitors, all interested in the little 34 foot boat. My 6-cylinder, Kermath motor seemed to excite the interest and curiosity of the Esquimaux more than anything else about the boat. They could speak no English but it was amusing to see them point out to each other some feature of the motor and when the motor was started for their benefit they were like a lot of children. In fact they are children, happy, jolly and carefree, and almost always smiling.

Capturing Seals.

One of the things that stand out strongly in my mind was seeing three Esquimaux hunters capture some seals. We had gone up Nachvak Bay, one of the longest of the fiords, and on our way up had passed some Esquimaux tents. Returning from the head of the fiords, we came upon the hunters in their skinboats, or kyaks, just as they had captured two or three seals which were strapped ... their boats, and I got some good photos of them.

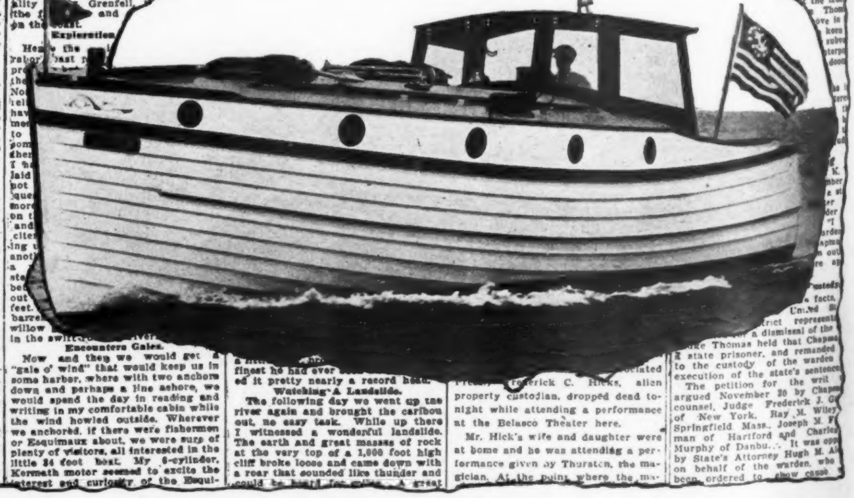
The Hunter's Camp.

They raced after us as ... down to their camp, off ... chored, the hunters arri... ter us. The young man ... me, a Newfoundlander ... a few words of Esquir... and we learned that t... come from Cape Chidl... expedition. That they ... cessful was indicated ... ous seal and caribou ... the sun. As soon as th... ed, the children, of w... a large number in th... the seals and dragged ... camp. Then the wome... papooses strapped to th... to and began skinning ... which they did most def... knife resembling a meat ch... semi-circular affair with a very ... edge. Dozens of "huskeys", the Esquimaux dog, watched the operation with eager anticipation, and occasionally one would sneak in and steal a bit of meat and rush off, followed by the pack, when there would be a lively fight for the possession of the tid-bit. The hunters, probably feeling they had done their part, stood by, watching the women do the rest.

Touched by Civilization.

It was all most interesting, and gave one an idea of these people in their primitive state. The great majority of the Labrador Esquimaux are looked after and are to a greater or less extent under the charge of the several Moravian missions there and have adopted much of the dress and customs of the white people. This has not been entirely to their advantage.

Shooting Caribou.



... a litt... finest he had ever ... ed it pretty nearly a record head.

Watching A Landslide.

The following day we went up the river again and brought the caribou out, no easy task. While up there I witnessed a wonderful landslide. The earth and great masses of rock at the very top of a 1,000 foot high cliff broke loose and came down with a roar that sounded like thunder and could be heard for miles. A great volume of smoke arose, as if from a volcano, caused doubtless by the friction of the great rock masses. It was most awe-inspiring. I have referred to greeting Captain Bob ...

Wind 55 Miles an Hour.

The passage to St. Johns was a slow one. The steamer was overcrowded with fishermen and their families returning to Newfoundland and we were still further delayed by stormy weather, so it was October 24 before we finally arrived there. I was fortunate enough to catch a steamer just leaving for Halifax and wound up my summer cruising with an interesting and exciting experience, an eighty-five miles an hour gale ...

> **Craft Behaved Well.**
>
> It had been a delightful summer full of novel and interesting experiences and life in the most invigorating, bracing, health-giving air that I know of. I sometimes think that Ponce de Leon should have sought the "Fountain of Youth" in Labrador rather than in Florida. My small craft had behaved finely and though on occasion we pushed her into some rough water she never failed me and proved a splendid sea boat, able and comfortable.
>
> **Grenfell Work Progressing.**
>
> ... great pleasu...

... lation. Just ... foundly interested in raising funds for a new and modern hospital at St. Anthony, Newfoundland, to take the place of a wooden structure that is gradually falling to pieces. The foundation for the new hospital had already been laid during the past summer and the work was going on when our steamer called at St. Anthony on my way south.

I had hoped to have the doctor with me for part of my cruise, but as he was acting as pilot for his new mission steamer that had recently arrived from England he could not join me. Several times in previous years he had cruised with me and together we had explored and chartered ... the fiords. As a ...

... ociated ... Frederick C. Hicks, alien property custodian, dropped dead tonight while attending a performance at the Belasco Theater here.

Mr. Hick's wife and daughter were at home and he was attending a performance given by Thurston, the magician. At the point where the ma...

to the United States circuit court ... appeals in New York for a re... of Judge Thomas' decision, and the writ is denied there, will carry to the supreme court of the United States, as his final move to escape the gallows.

Chapman's chief claim that he ... illegally removed from the Atlanta penitentiary to stand trial in Connecticut, and that President Coolidge's commutation terminating the ... federal sentence, was in reality a pardon and therefore ineffective with... acceptance, were dismissed ... Thomas as without merit.

... Refusal Immaterial.

... legally and prop... the state of Conne... Thomas. His refu... mutation of his ... President, is imma... "The rule ... he said, "that ... need acceptan... order to be ope... however, does n... ceded.

...disagreed with ... Chapman's lawy... ation by the Pr... ...ct a pardon beca... ...titute a lesser ... greater, as is requi... commutation. "Ch... ...dy served a cert... time on the origi... ...ence of the court," ... "and the commutation ... that term for the term w... the United States district court ... the southern district of New Y... imposed, and there is no condition ... tached to his release. The contenti... that the relator (Chapman) is a fe... eral prisoner is, therefore, untenable.

No Right to Prison Life.

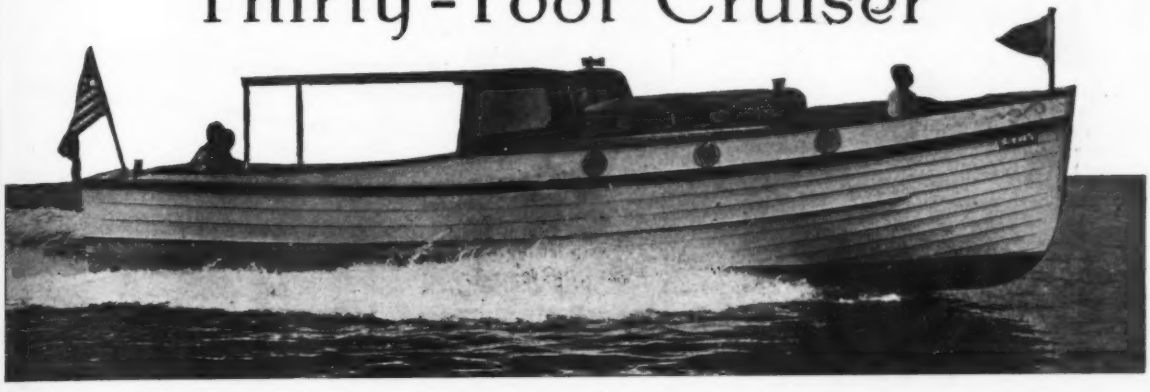
Chapman has no constitutional right to spend twenty-five years in federal penitentiary, as he claimed, by reason of the priority of his federal sentence, said Judge Thomas. The bandit "did not become invested with a tenancy for years of a cell in the Atlanta penitentiary by the commission of a felony and the sentence of the federal court following his conviction of that felony," declared the judge.

The federal government might ... that Chapman serve ... ...nty-five years be... ...ce was inv... held. "But ... the fede... Thom... ove in ... keen ... subse... terpr... doo...

... facts, ... United St... ...trict represent... a dismissal of the ... ...dge Thomas held that Chapman ... a state prisoner, and remanded ... to the custody of the warden ... execution of the state's sentence.

The petition for the writ ... argued November 30 by Chapman's counsel, Judge Frederick J. G... of New York, Ray M. Wiley ... Springfield Mass., Joseph M. F... man of Hartford and Charles ... Murphy of Danbury. It was opp... by State's Attorney Hugh M. Al... on behalf of the warden, who ... been ordered to show cause ...

Thirty-Foot Cruiser



THE 30-foot Cruiser has been perfected to meet the demand for a moderate priced Cruiser. Like all Banfield Sea Skiffs this boat is in a distinct class. Its seaworthy qualities and speed can not be duplicated in any other but a Banfield boat. Cabin has all necessary comforts, full headroom and sleeps four. Trim is in mahogany with blue upholstery which presents a very pleasing combination. Built with or without forward cockpit.

Specifications

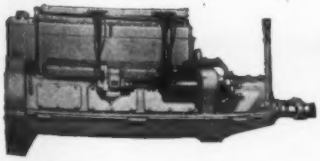
Length—30 feet.
Beam—8 feet 6 inches.
Draft—24 inches.
Keel or Bottom—White Spruce, 2 inch x 30 inch.
Deadwoods—White Oak, 5 inch.
Transom—Mahogany, 1½ inch.
Shoe—Long Leaf Yellow Pine, 5 inch.
Frames—⅞ inch x 1¼ inch White Oak spaced 6 inch centers. All frames extend from Gunwale to Gunwale in one piece.
Planking—White Cedar Lap Strake, ¼ inch.
Bulkheads—Clear White Pine, ¾ inch.
Fastenings—Copper rivets over copper burrs, heavy brass screws in plank ends, brass bolts in motor beds and deadwoods.
Cockpits—Self-bailing.
Hardware—Bronze and brass.
Fuel Tanks—100 gallon capacity.
Fresh Water Tank—25 gallon capacity.
Rudder—Bronze, machined from solid stock.
Windshield—Mahogany, built to withstand the high seas.
Cushions—Kopac filled life preserver type.
Stuffing Box—Special bronze, self-aligning.
Steering Wheel—Chain and sprocket.
Struts—Extra heavy bronze.
Propeller Shafting—Bronze, Hyde propeller.
Equipment—Toilet, galley sink, wash basin, stove, ice box, automatic bailer, electric cabin and running lights, horn, whistle, fog bell, fire extinguisher, four life preservers, fenders, motor tools, name and license number.

Tiebout
MARINE HARDWARE
Used Exclusively

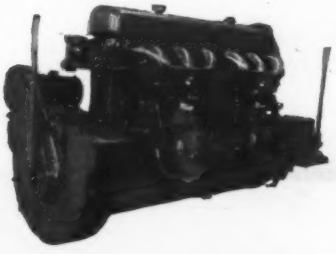
Price Complete Less Motor
$4500
F.O.B., Atlantic Highlands, N.J.
Powered with

HYDE PROPELLERS
Used Exclusively

KERMATH



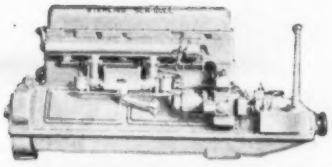
70 H.P., Speed 16 M. P. M., $5,650
70 H.P., TWIN SCREW,
Speed 22 to 25 M.P.H., $7,200
100 H.P., Speed 19 M.P.H., $5,950



HALL-SCOTT

200 H.P., LM6,
Speed 30 M.P.H., $8,250

Sterling



150 H.P., 6 cyl., SEA GULL,
Speed 23 M.P.H., $7,950
190 H.P., 4 cyl., DOLPHIN,
Speed 29 M.P.H., $7,850

"Helvetia V," Thirty-four Foot De Luxe Model, Built for Mr. Columbus O'D. Iselin

"Ju Ju," Twenty-six Foot Fishing Boy, Built for Mr. Julien T. Davies

"Subito," Thirty-four Foot Sedan Express Cruiser, Built for Miss L. N. Grace

"Aislamienta," Thirty-four Foot Fishing Boy, Built for Mr. J. H. R. Cromwell

"Bill Bob II," Thirty-four Foot De Luxe Model, Built for Mr. W. F. Taubel

"Eleanor," Thirty-four Foot Fishing Boy, Built for Col. Edwin M. Chance

Advertising Index will be found on page 84

Thirty-Four Foot *Banfield* Fishing Boy

THE 34-ft. Fishing Boy contains arrangements for cruising as well as deep-sea fishing. The cabin sleeps four, with headroom of 5 ft. This boat represents the last word in design for the off-shore fishing, and like other Banfield models is found among the best-known sportsmen of today, who appreciate the speed and safety qualities of these boats. Their shallow draft permits you to get into places where other boats of their size cannot venture. The highest quality of workmanship and materials are used in their construction and will give you life-long service.

Specifications

Length—34 feet.
Beam—9 feet 10 inches.
Draft—24 inches.
Keel or Bottom—White Spruce, 2 inch x 30 inch.
Deadwoods—White Oak, 5 inch.
Transom—Mahogany, 1½ inch.
Shoe—Long Leaf Yellow Pine, 5 inch.
Frames—⅞ inch x 1¾ inch.
Planking—White Cedar, ¾ inch.
Bulkheads—Clear White Pine, ¾ inch.
Fastenings—Copper rivets over copper burrs, heavy brass screws in plank ends, brass bolts in deadwoods and motor beds.
Hardware—Bronze and brass.
Cockpit—Self-bailing.
Fuel Tanks—100 gallon capacity.
Fresh Water Tank—50 gallon capacity.
Cockpit Covering—Removable fly awning.
Rudder—Bronze from solid stock.
Steering Wheel—Chain and sprocket.
Windshield — Mahogany, with plate glass.
Stuffing Box—Special bronze, self-aligning.
Propeller Shafting—Bronze, Hyde propeller.
Equipment—Toilet, stove, galley, ice-box, electric cabin and running light, electric horn, whistle, self bailer, fog bell, six life preservers, bilge pump, anchor, rope, two fire extinguishers, fenders, motor tools, cabin cushions, name and license number.

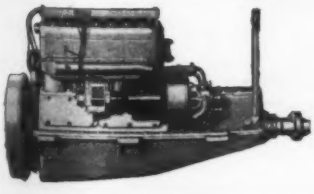
Price Complete Less Motor
$5500
F.O.B., Atlantic Highlands, N.J.

Powered with

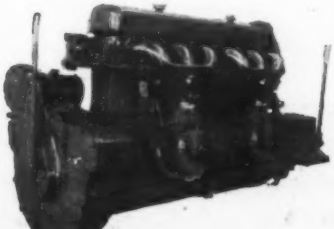
Tiebout
MARINE HARDWARE
Used Exclusively

HYDE PROPELLERS
Used Exclusively

KERMATH



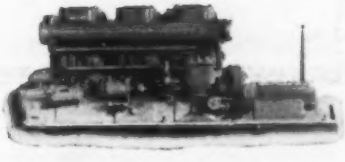
TWIN SCREW
70 H.P., Speed 20 to 22 M.P.H., $8,200



HALL-SCOTT

200 H.P., LM6,
Speed 26 to 28 M.P.H., $9,250

Sterling



290 H.P., DOLPHIN SPECIAL,
Speed 28 to 30 M.P.H., $10,000

Prominent Owners of BANFIELD SEA SKIFFS

MR. AUGUST BELMONT, JR.
MR. A. BURWELL
MR. HENRY E. BUTLER
MR. JAMES H. R. CROMWELL
COL. EDWIN M. CHANCE
MR. HUGH C. CRESSWELL
MR. DOUGLAS DEARBORN
MR. JULIEN T. DAVIES
MR. L. DELANO
MR. ARTHUR ELY
MR. FRANKLIN N. FOOTE
MR. C. W. FEIGENSPAN
MISS L. N. GRACE
MR. PERCY HEINEMAN
MR. COLUMBUS O'D ISELIN
MR. H. DE B. JUSTISON
MR. JOHN L. KUSER
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MR. RICHARD G. LEDIG
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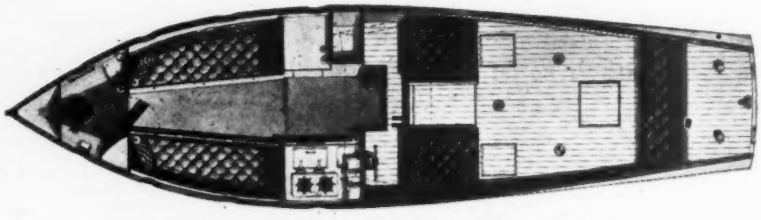
MR. W. F. TAUBEL
MR. W. K. VANDERBILT
MR. GEORGE G. WILLIAMS
MR. ALEX. M. WHITE



Layout Plan 34 Foot De Luxe Model Cruiser

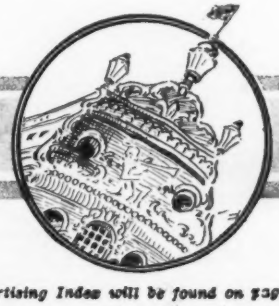
NOTICE

All Sterling and Kermath Motors used in our boats are sold through and serviced in a most satisfactory manner by BRUNS-KIMBALL & CO. of New York, the large and well-known engine distributors.

BANFIELD SEA SKIFF WORKS, Inc.

The Largest Builders of Sea Skiffs in the World

ATLANTIC HIGHLANDS **NEW JERSEY**



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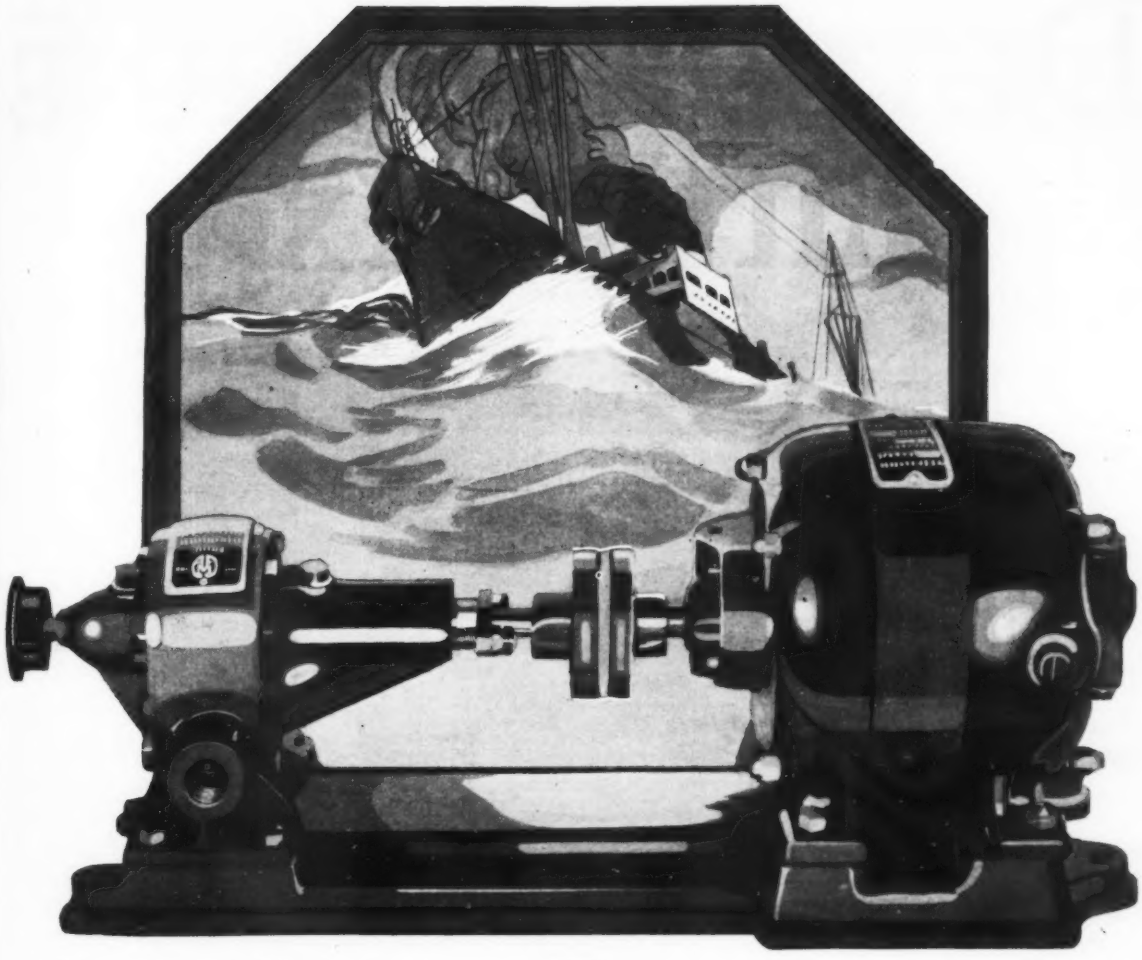


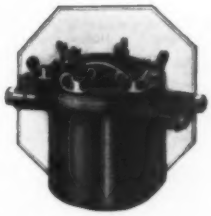
Steadfast and True —in Emergencies!

Whether your craft is for pleasure—speed or commercial use, its ability to conquer the danger of fire, storm or leakage depends on the pumping unit.

The best of pump protection is a safety precaution no boat owner can afford to neglect.

AMF Rotary All-Purpose Pumps for bilge, deck-washing or emergency are directly connected to a high-speed power unit. This exclusive AMF feature eliminates all need of reduction gears and belts. Smooth, instantaneous response is the result—no trouble—no delay—no friction, wear or vibration.

A Type for Every Ship Afloat



Basket Strainer

Cylindrical bronze mesh basket within a cast iron body effectively keeps dirt and grit out of the pump. May be attached at any point along the bilge line.

MACHINES for

Feeding *Filling*
Weighing *Packing*
Bagging *Sealing*
Label & Bottle-Capping
Package Wrapping

•

Cigar and Cigarette Making Machines
Stemming Machines
Color Sorting Machines

•

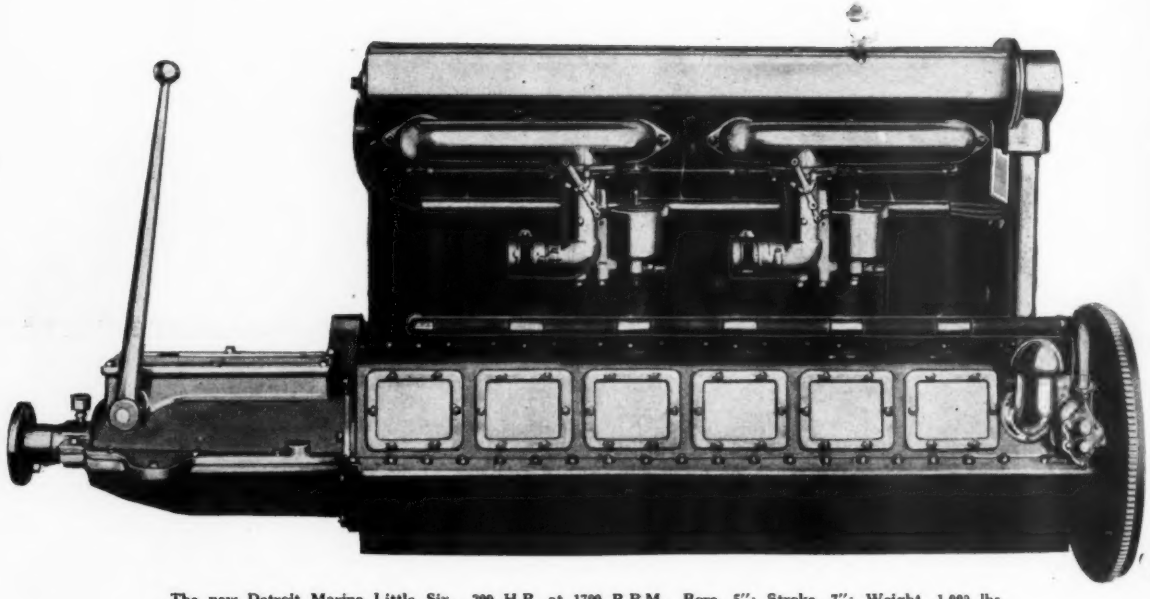
Litho Transferring Machines

•

Vacuum and Pressure Pumps

AMERICAN MACHINE & FOUNDRY CO.
Brooklyn, N.Y., U.S.A.

DETROIT MARINE Little Six



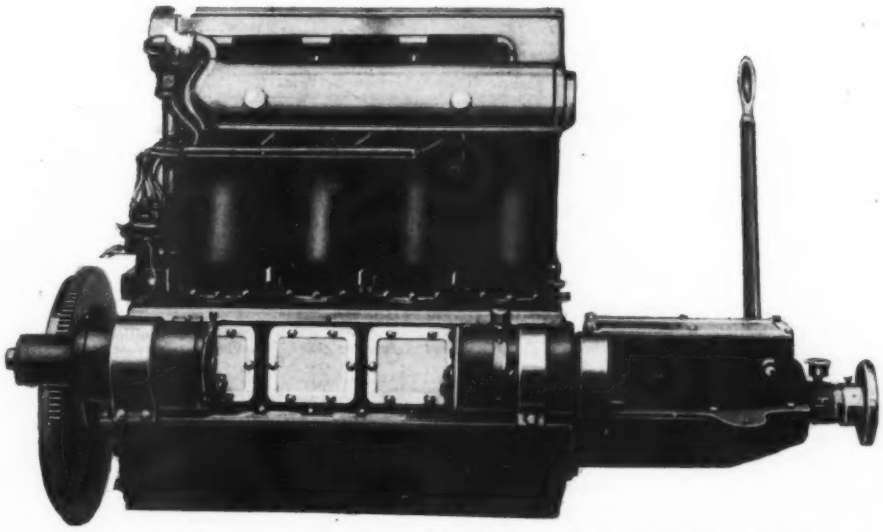
The new Detroit Marine Little Six. 200 H.P. at 1700 R.P.M. Bore, 5"; Stroke, 7"; Weight, 1,000 lbs. Price, $3,500 F. O. B. Detroit.

IN announcing these two new Detroit Marine Engines, the Little Six 200 H.P., 5" x 7", and the Four, 125 H.P. of the same bore and stroke, we do so with great confidence of their success. Both of these models have been under development for the last six years. They have been tried and tested, not only in the laboratory, but in actual installations under severe conditions. Although designed principally for fast runabouts where speeds of 20 to 50 miles per hour are wanted, both models have given perfect results in cruisers up to 45 feet in length.

Below: Kensington, a 57 ft. speed yacht designed by J. Murray Watts of Philadelphia, and owned by Geo. S. Cox of the same city. Two 300 H.P. "Big Six" Detroit Marine engines give the Kensington a speed of 30 miles per hour.

Advertising Index will be found on page 384

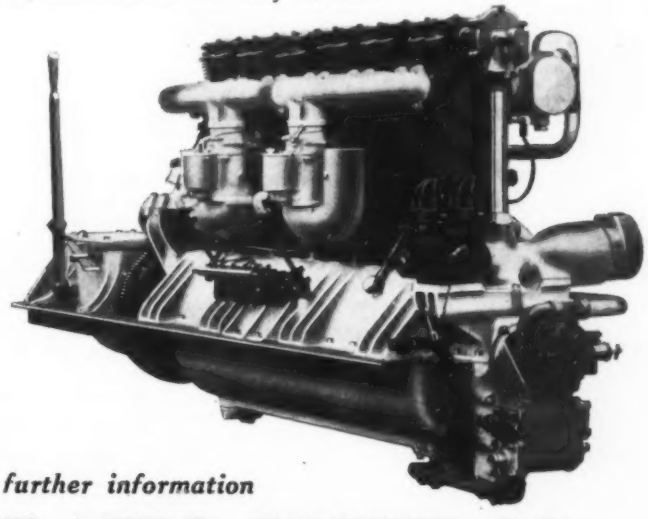
DETROIT MARINE Four



The new Detroit Marine Four. 125 H.P. at 1700 R.P.M. Bore, 5"; Stroke, 7"; Weight, 1,000 lbs. Price, $2,500 F. O. B. Detroit.

THE two new Detroit Marine Engines represent the highest development in marine power plants on the market today. They are the lightest in weight and strongest in construction of any marine engines of equal size and power. All parts are accurately machined and perfectly balanced. In operation they are unusually quiet, vibrationless and very flexible.

If you want high speed plus dependability, reliability, durability and economy then investigate these motors.



DETROIT MARINE BIG SIX

300 H.P.
at
1650 R.P.M.

Price, $3,250
F. O. B. Detroit

Specifications: 6 cylinders; 6.3" bore, 7.1" stroke. Overall length, 94"; width, 30"; height, 42½". Weight, 1,750 lbs.

Send for further information

DETROIT MARINE-AERO ENGINE CO.

409 CONNECTICUT AVE., DETROIT, MICH.

Distributors:

SEXTON MOTOR CO., INC.
140 Washington St. New York, N. Y.
207 S. Front St. Philadelphia, Pa.
236 State St. Boston, Mass.
311 Star Bldg. Washington, D. C.

ATLANTIC BOAT YARD CO.
201 S. W. Sixth St. Miami, Fla.

A. G. KERR
1200 Fourth Ave. S. Seattle, Wash.

America's Leading Marine Engine Builders

(*Continued from page 270*)

Stearns Motor Manufacturing Co.
Ludington, Mich.

STEARNS EXTRA RESERVE

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plug	Carburetor
MHU.....	50	4½x6	4	4	1200	1050	Pressure.....	Joe's.....	Bosch.....	Bosch.....	A. C.....	Stromberg
MHR.....	80	4½x6	4	4	1800	900	Pressure.....	Joe's.....	Bosch.....	Bosch.....	Champion....	Stromberg
MDU.....	70	5⅛x6½	4	4	1200	1750	Pressure.....	Joe's.....	Bosch.....	Bosch.....	Champion....	Stromberg
MDR.....	115	5⅛x6½	4	4	1600	1350	Pressure.....	Joe's.....	Bosch.....	Bosch.....	Champion....	Stromberg
MDU6.....	120	5⅛x6½	6	4	1200	2500	Pressure.....	Joe's.....	Bosch.....	Bosch.....	Champion....	Stromberg
MDR6.....	160	5⅛x6½	6	4	1600	2100	Pressure.....	Joe's.....	Bosch.....	Bosch.....	Champion....	Stromberg
MEU.....	90	5½x6½	4	4	1200	1800	Pressure.....	Joe's.....	Bosch.....	Bosch.....	Champion....	Stromberg
MEU6.....	140	5½x6½	6	4	1200	2550	Pressure.....	Joe's.....	Bosch.....	Bosch.....	Champion....	Stromberg
MER.....	140	5½x6½	4	4	1600	1400	Pressure.....	Joe's.....	Bosch.....	Bosch.....	Champion....	Stromberg
MER6.....	180	5½x6½	6	4	1600	2050	Pressure.....	Joe's.....	Bosch.....	Bosch.....	Champion....	Stromberg

Universal Motor Co.
40 Ceape Street, Oshkosh, Wis.

Model	Horse power	Bore & stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plug	Carburetor
Flexifour.....	10-15	2¼x4	4	4	250-2000	325	Circulation and Splash	Universal	Own....	Battery & Magneto	Champion	Schebler
Superfour Medium Speed...	15-30	3¼x4½	4	4	250-2000	425	High Pressure	Paragon	Bosch.. 2 unit	Battery & Magneto	Champion	Schebler
Superfour High Speed.....	20-40	3¼x4½	4	4	350-2800	425	High Pressure	Paragon	Bosch.. 2 unit	Battery & Magneto	Champion	Schebler
Superfour Special Racing...	42	3¼x4½	4	4	3000	300	High Pressure	.....	Bosch 2 unit	Racing Magneto....	Champion	Two Zenith

Universal Products Co.
Doman Engineering Division
412 Nebraska Street, Oshkosh, Wis.

DOMAN

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plug	Carburetor
K.....	4-5	3¾x4½	1	4	800	165	Splash.....	Paragon.....	Hand.....	Wico.....	Champion.....	Schebler
B.....	5-7	4¼x6	1	4	800	575	Splash.....	Paragon.....	Hand.....	Wico.....	Champion.....	Schebler
HM2.....	12-15	4¼x6	2	4	800	750	Force.....	Paragon.....	Electric....	Bosch.....	Champion.....	Schebler
HM4.....	25-40	4¼x6	4	4	900	1250	Force.....	Paragon.....	Electric....	Bosch.....	Champion.....	Schebler
TM4.....	50-60	6½x7	4	4	800	1750	Force.....	Paragon.....	Electric....	Bosch.....	Champion.....	Schebler

Joseph Van Blerck, Inc.
461-8th Avenue, New York City

CONTINENTAL-VAN BLERCK

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Spark plugs	Carburetor
250 Racing.....	50	2.6x4.75	6	4	3500	375	Full pressure....	Planetary type	Bosch.....	A. C.....	Schebler
250	15-50	2¾x4¾	6	4	800-3500	500	Full pressure....	Planetary type	Bosch.....	A. C.....	Schebler
251	18-50	3⅛x4¾	6	4	800-2500	600	Full pressure....	Planetary type	Bosch.....	A. C.....	Schebler
252	40-90	3¾x5	6	4	800-2500	850	Full pressure....	Planetary type	Bosch.....	A. C.....	Schebler
253	45-120	4½x5¼	6	4	800-2500	1125	Full pressure....	Planetary type	Bosch.....	A. C.....	Schebler
254	60-130	4½x5¾	6	4	800-2000	1475	Full pressure....	Planetary type	Bosch.....	A. C.....	Schebler
Van Blerck, Navy Type											
N-4-SS	40-68	5½x6	4	4	600-1000	1675	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler
R-4-SS	55-88	5¾x7	4	4	600-1000	1700	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler
N-4-HS	76-104	5½x6	4	4	1000-1500	1675	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler
R-4-HS	100-137	5¾x7	4	4	1000-1500	1700	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler
N-6-SS	61-100	5½x6	6	4	600-1000	2100	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler
R-6-SS	83-123	5¾x7	6	4	600-1000	2200	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler
N-6-HS	115-156	5½x6	6	4	1000-1500	2100	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler
R-6-HS	152-205	5¾x7	6	4	1000-1500	2200	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler
N-12-SS	122-200	5½x6	12	4	600-1000	5000	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler
R-12-SS	166-246	5¾x7	12	4	600-1000	5200	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler
N-12-HS	230-310	5½x6	12	4	1000-1500	5000	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler
R-12-HS	300-409	5¾x7	12	4	1000-1500	5200	Full pressure....	Sliding gear....	Leece-Neville..	Champion....	Schebler

The Sanderson-Cyclone Drill Co.
Orrville, Ohio

W-S-M

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Carburetor
A4	45	4¾x6	4	4	950	1450	Pressure.....	Own.....	Leece-Neville.....	Magneto.....	Schebler
A4R	60	4¾x6	4	4	1400	1350	Pressure.....	Own.....	Leece-Neville.....	Magneto.....	Stromberg

Wisconsin Motor Mfg. Co.
Station A. Milwaukee, Wis.

WISCONSIN

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
White Cap 4..	42	4x5	4	4	1400	850	Force feed.	Paragon.	Leece-Neville...	Bosch Magneto..	Champion..	Stromberg
White Cap 6..	43	3⅛x5	6	4	1400	1050	Force feed.	Paragon.	Leece-Neville...	Bosch Magneto..	Champion..	Stromberg
Type AM.....	54	4¼x5½	4	4	1400	890	Force feed.	Paragon.	Leece-Neville...	Bosch Magneto..	Champion..	Stromberg

Gar Wood, Inc.
409 Connecticut Avenue, Detroit, Michigan

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition	Spark plugs	Carburetor
T-26	400	5x7	12	4	1800	1500	Pressure....	Joes....	Gar Wood..	Delco 2 spark	Champion special	Zenith
TS-26.....	500	5x7	12	4	2200	1550	Pressure....	Joes....	Gar Wood..	Delco 2 spark	Champion special	Zenith

Wright Aeronautical Corp.
Paterson, N. J.

WRIGHT

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
Typhoon.....	550	5.75 x6.25	12	4	1850	1860	Force feed....	Wright.....	Leece-Neville..	Scintilla.....	A. C.....	Stromberg

(*Continued on page 302*)

Dependable Power for Every Purpose

The Red Seal Era!

Certain definite influences have marked the progress of every step in the improvement of this country's transportation systems.

The first steam engine of Watts, the experimental auto of Elwood Haynes and the building of the first Continental motor at the birth of the automotive industry, were all due to those compelling influences which speed up effort.

With each successive step in the perfection of the present day master-pieces of transportation, Continental has kept abreast of the industry. During this entire period of development Continental leadership has remained unquestioned, its success being reflected in every field where gasoline power is employed.

Because of the many signal achievements in internal combustion engine design and performance this is truly the Red Seal Era—an era which has marked the Red Seal as the symbol of supremacy in motor manufacture and a fitting tribute to the efforts of specialists who have concentrated upon one line of endeavor for twenty-five years.

Today Red Seal Motors are used in every country of the civilized world, blazing new paths to greater motor efficiency and building up greater prestige through economical operation.

Standing out in bold relief among the Red Seal accomplishments is a solid background of unlimited resources and sound manufacturing policies—the buyer's assurance of a successful past and a permanent future.

Dependable power for every purpose is a Red Seal actuality and a proven fact, not only for today but in the years to come—the best possible guarantee of perfect power plant performance.

CONTINENTAL MOTORS CORPORATION
Offices: Detroit, Michigan, U.S.A. *Factories:* Detroit and Muskegon
The Largest Exclusive Motor Manufacturer in the World

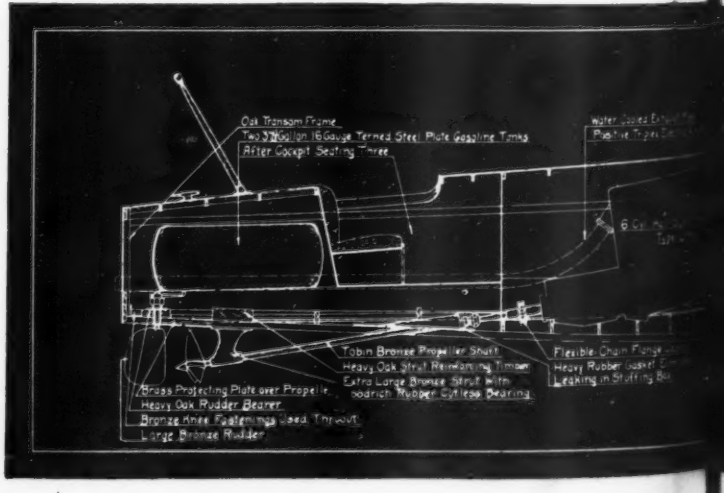
Continental Motors

Belle Isle Boats

THE buoyancy of swift flight finds its true interpretation in the fast Bear Cat runabout. There is a steadiness of fluid power—power so free from sound and shock that you are literally unconscious of a moving mechanism—but you will not discover this until you have spent a brief quarter hour in the Super Bear Cat.

THE Belle Isle Super Bear Cat is the distinguished product of the Belle Isle Boat and Engine Co. In it is the culmination of fifteen years' experience in the building of fine boats. Appearance, design and speed recommend it strongly to those who desire a fast runabout entirely free from mechanical troubles of any kind.

NO other boat is accorded the warm praise the Super Bear Cat receives wherever sportsmen and boating enthusiasts foregather. Because it is so justly recognized as the finest runabout afloat it is accepted everywhere as the standard of comparison.


Oak Transom Frame
Two 37 Gallon 16 Gauge Terneed Steel Plate Gasoline Tanks
After Cockpit Seating Three
Tobin Bronze Propeller Shaft
Heavy Oak Strut Reinforcing Timber
Extra Large Bronze Strut with Goodrich Rubber Cutless Bearing
Brass Protecting Plate over Propeller
Heavy Oak Rudder Bearer
Bronze Knee Fastenings Used Throughout
Large Bronze Rudder

Luxurious riding qualities and comfortable accommodations for 10 passengers

THE SUPE

BELLE ISLE BO

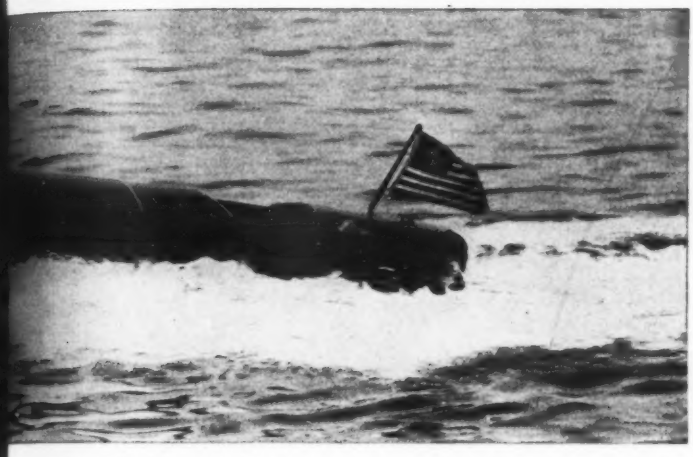
DETRO

New York Office: 1210 Equi
OPPOSITE

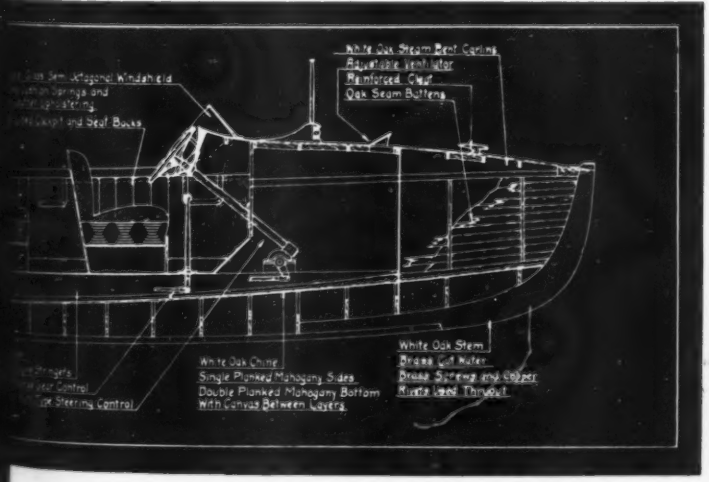
New York Distrib

Advertising Index will be found on page 384

Belle Isle Boats



THE graceful Honduras mahogany hull and stream line decks, luxurious fittings and genuine leather upholstering combine to mark the Super Bear Cat as the Aristocrat of Runabouts. Indeed, to own the Super Bear Cat is to court distinction.



Belle Isle Super Bear Cat Specifications

HULL—Length, 30 feet; Beam, 7 feet; Draft, 23 inches; Passenger capacity, 10 people.
Displacement, 4,000 pounds; Honduras mahogany planking, double planked bottom, single planked batten seamed sides, copper riveted and brass screw fastened throughout.

POWER PLANT—Hall-Scott L. M.—6 cylinder Marine motor, developing 225 horse power at 1,800 r. p. m.

SPEED—40 miles per hour.

STARTING AND LIGHTING SYSTEM—Two unit, 12 volt Delco generator and starting motor.

COOLING SYSTEM—Separate water cooled oil tank.

STEERING GEAR—Automobile type worm and drag link.

FUEL SUPPLY—Two 35 gal. steel tanks with Four Auto Pulse Electric gasoline pumps.

BULKHEADS—Two reinforced engine compartment bulkheads.

SALT WATER EQUIPPED THROUGHOUT—All brass underwater fittings and nickel plated brass deck hardware.

STANDARD EQUIPMENT—Angled Windshield, non-breakable glass; Yacht ensign; two fire extinguishers; name burgee; mahogany flag pole forward; mahogany combination flag pole and rear light aft; 30 lb. folding anchor; streamline electric bow light; streamline port and starboard lights; mahogany oar and pike pole; tool kit; bilge pump; oil priming can and brackets; electric Bosch horn; name and hailing port on bow and stern (in gold leaf); five life preservers; cotton tie lines—fore and aft; cushions for seats and backs; aluminum bound floor linoleum; four fenders; pilot rules; 2 mechanical bailers; tarpaulin for after cockpit; extra 10 gal. copper oil tank; extra 10 gal. copper gas tank; fresh water container.

Upholstered in genuine Spanish leather with double spring seats and backs.

SUPER BEAR CAT

BOAT AND ENGINE CO.

DETROIT, MICHIGAN

210 Equitable Bldg., 393 Seventh Avenue

OPPOSITE PENNSYLVANIA STATION

Dealer Distributor Gar Wood Lackawanna Boats

Belle Isle Boats

The Belle Isle Super Bear Cat with Hall-Scott LM-6. Speed 40 miles per hour.

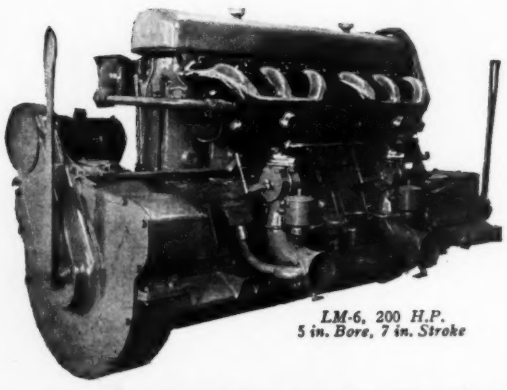
DEPENDABILITY

The Outstanding Characteristic of Hall-Scott Marine Motors

Universal recognition of the unsurpassed dependabiliy of Hall-Scott Marine Motors is far more than an enviable tribute to engineering skill and manufacturing precision. It is the Hall-mark of excellence and the guarantee of lasting satisfaction.

Many of America's finest runabouts and fast cruisers owe their mechanical superiority to the unsurpassed performance of Hall-Scott marine powerplants.

You take no chance when you install a Hall-Scott—Write today for descriptive catalogs.



LM-6, 200 H.P.
5 in. Bore, 7 in. Stroke

Single and Twin Screw Plants in stock at

HALL-SCOTT
MOTOR CAR CO., Inc.

Eastern Sales and Service Branch
461 Eighth Avenue
New York City

Factory: Berkeley, California

BELLE ISLE BOAT AND ENGINE CO.

DETROIT NEW YORK

New York Distributors of Hacker Boats

Advertising Index will be found on page 584

LEADS THEM ALL

STEARNS ENDURANCE

STEARNS QUALITY

STEARNS VALUE

EXTRA RESERVE
STEARNS
MARINE ENGINE
SIXES
FOURS

STEARNS ECONOMY

STEARNS PERFORMANCE

STEARNS WORKMANSHIP

BETTER PERFORMANCE
GREATER VALUE
HIGHER QUALITY

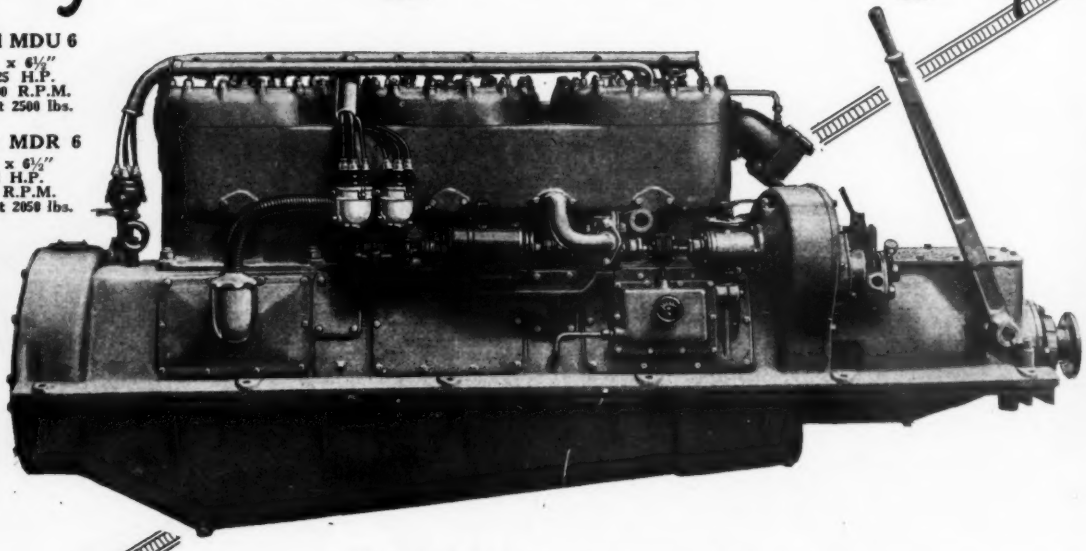
EXTRA RESERVE
STEARNS
MARINE ENGINE

FINER WORKMANSHIP
MORE ECONOMICAL
LASTING ENDURANCE

A New Stearns Six

Model MDU 6
5½" x 6½"
90-125 H.P.
900-1200 R.P.M.
Weight 2500 lbs.

Model MDR 6
5½" x 6½"
160 H.P.
1600 R.P.M.
Weight 2050 lbs.



NEVER has any six-cylinder marine engine been accorded a more enthusiastic approval than that given the new six-cylinder Stearns Extra Reserve Marine Engine since its debut a few months ago. This new Stearns is many "jumps" ahead of any six of equal size and power. Match it with any marine engine you wish; but in none will you find more advanced engineering, higher quality or more thorough workmanship.

Oversize throughout, not only in dimensions, but in strength as well, you have in this new Stearns a reservoir of power that will endure through continuous daily service for many years to come.

Diana II, a 46 ft. cruiser owned by Mr. George Gingras, of Rockledge, Florida, and powered by the Stearns Six Extra Reserve Marine Engine.

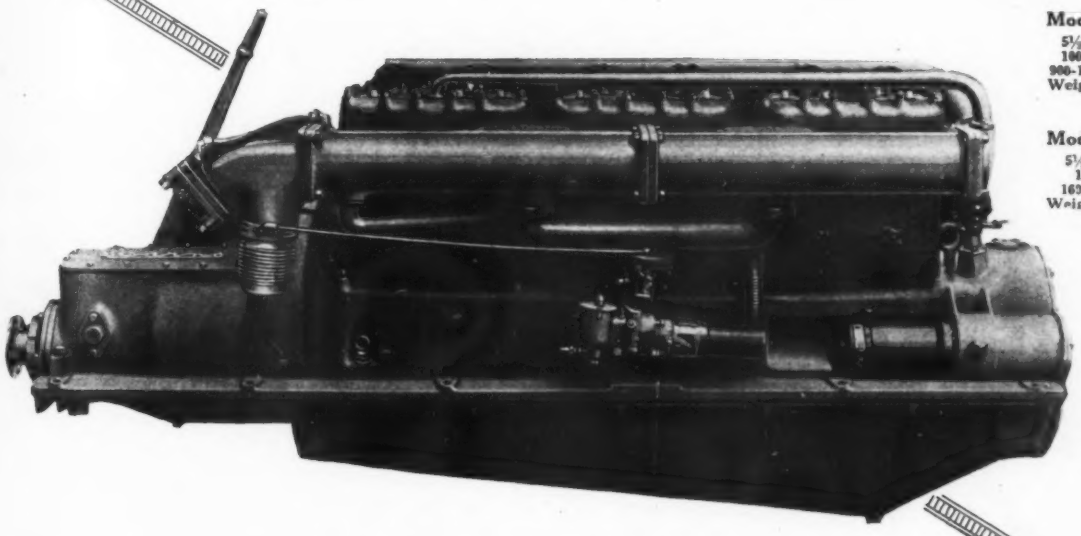
Advertising Index will be found on page 384

BETTER PERFORMANCE
GREATER VALUE
HIGHER QUALITY

STEARNS EXTRA RESERVE MARINE ENGINE

FINER WORKMANSHIP
MORE ECONOMICAL
LASTING ENDURANCE

A Big Powerful Engine



Model MEU 6
5½" x 6½"
100-140 H.P.
900-1200 R.P.M.
Weight 2550 lbs.

Model MER 6
5½" x 6½"
180 H.P.
1600 R.P.M.
Weight 2875 lbs.

THE wide power range of the new Stearns Six—90 H.P. to 180 H.P. at speeds of 900 to 1600 R.P.M., makes it admirably adaptable for service in cruisers, houseboats, work boats and runabouts, where the smoothness of a six is desired.

Refinements and improvements are found in every detail of its construction. Outstanding among the new features are a Skinner Oil Rectifier, which keeps the lubricating oil clean and like new. Combustion chambers are specially shaped to promote turbulence. Three spark plugs to each cylinder and two complete independent ignition systems insure perfect firing at all times. High pressure lubrication is forced direct to all wearing points and through a drilled crankshaft and a series of internal ducts in the crankcase.

Joebill II, a 46' x 12' cruiser owned by Mr. R. J. Perrine, Brooklyn, N. Y., and powered by the new Stearns Six Extra Reserve Marine Engine.

BETTER PERFORMANCE
GREATER VALUE
HIGHER QUALITY

STEARNS EXTRA RESERVE MARINE ENGINE

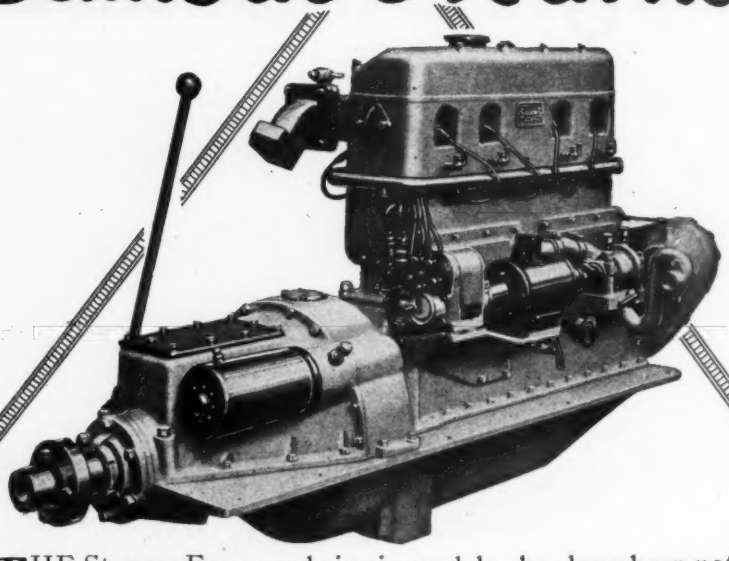
FINER WORKMANSHIP
MORE ECONOMICAL
LASTING ENDURANCE

The Famous Stearns "Four"

Model MHU
4½" x 6"
25-50 H.P.
500-1200 R.P.M.
Weight 1080 lbs.

Model MHR
4½" x 6"
80 H.P.
1800 R.P.M.
Weight 950 lbs.

Model MDU
5⅛" x 6½"
35-80 H.P.
500-1200 R.P.M.
Weight 1750 lbs.



Model MDR
5⅛" x 6½"
115 H.P.
1600 R.P.M.
Weight 1325 lbs.

Model MEU
5⅛" x 6½"
45-105 H.P.
500-1200 R.P.M.
Weight 1380 lbs.

Model MER
5⅛" x 6½"
140 H.P.
1600 R.P.M.
Weight 1400 lbs.

THE Stearns Four, made in six models, has long been noted for its unfailing power, quiet and smooth-running and low-operating cost. It's an engine that will last for years without that never-ending tinkering required by so many other power plants. A Stearns will not shake itself loose—it is not built that way. Its steady, velvety power is obtained through correct engineering without sacrificing the strength of any part. The Stearns will continue to run long after less carefully designed engines have met their fate on the scrap heap.

The Stearns marine engine experts will be glad to advise you regarding the most suitable Stearns for your boat. When writing give details of your boat and the speed desired.

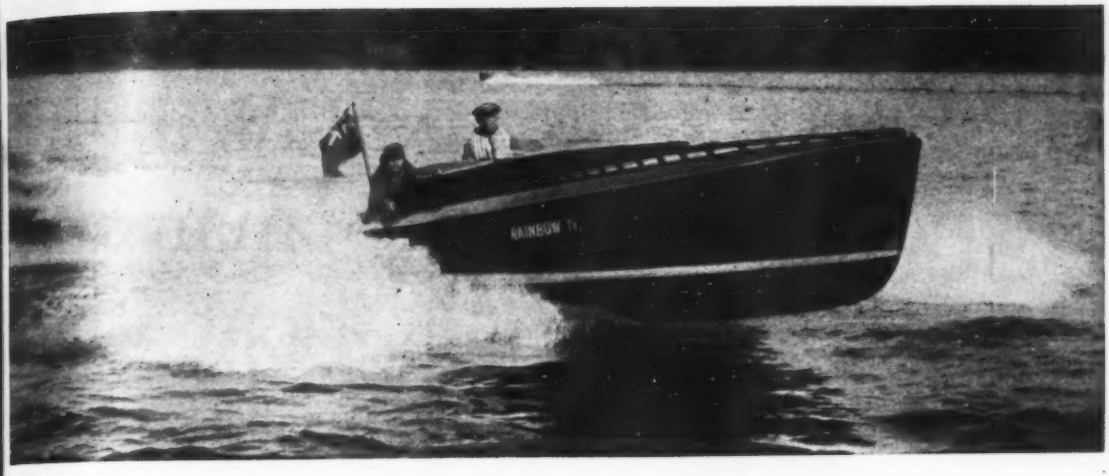
Catalog sent upon request.

STEARNS MOTOR MFG. CO.
LUDINGTON, MICHIGAN

Eugenia, a 38' x 10' cruiser owned by Dr. Eugene Swayne of Philadelphia and winner of the Philadelphia to New York Ocean race in August, 1925. Eugenia is powered with a model MHU Stearns Extra Reserve Marine Engine. This boat entered three races last year and won three cups.

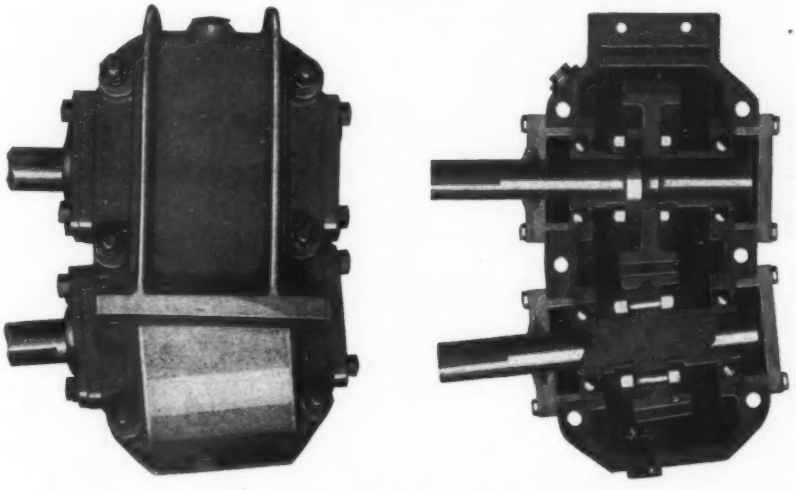
Frevilla, a 49' 5" x 12' yacht owned by Mr. Hart L. Meaney of San Francisco, Cal., and powered with a pair of model MDU Stearns Extra Reserve Marine Engines. Frevilla also has a Stearns De Luxe 32 volt lighting unit.

Advertising Index will be found on page 384



RAINBOW IV
SMASHED WORLD'S RECORD

With a



TRADE MARK

CROSS

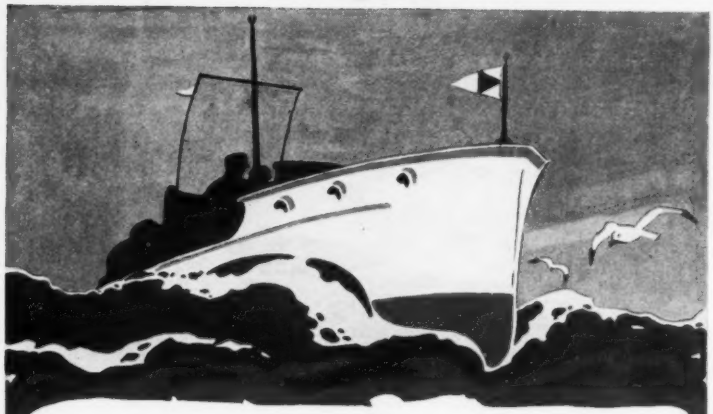
GEAR BOX

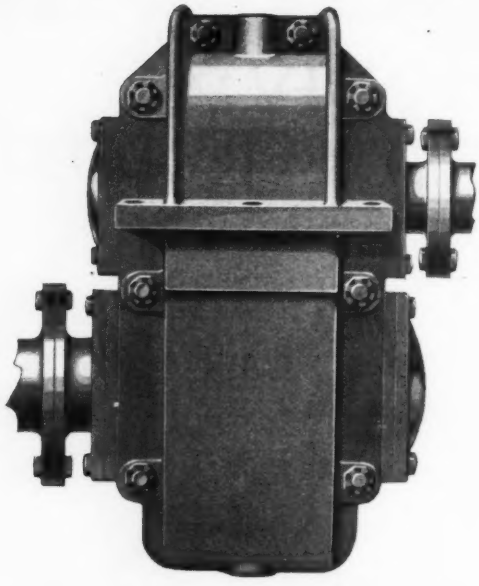
Cross Gear Boxes are used on 95% of all gear drive high speed runabouts, racing hydroplanes and racing boats in general. There is a definite reason why!

Standard equipment with Gar Wood, Inc., Horace Dodge Boat Works, Packard Motor Company and others. Send for literature.

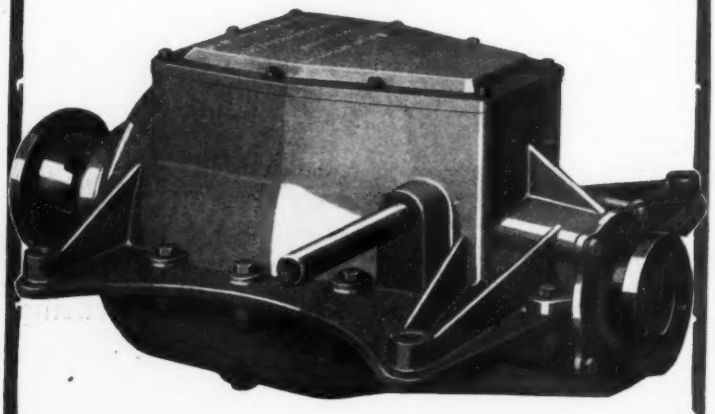
CROSS GEAR & ENGINE COMPANY

2260 BELLEVUE AVENUE DETROIT, MICHIGAN





CROSS REDUCTION GEAR



CROSS REVERSE GEAR

The New C
Will Tak
many ne
at the

For years the boating t ve s
length, reduced weight, free m
of sufficient size and pitc ndle

To accomplish this it is nec to
the revolutions at the prop d to
large to drive the boat.

Based upon our years of ex ce in
and offer to engine builde duct

**A sound-proof cas ard
bearing included—O ed**

Also See Th

BO BU

This enclosed type has a l app
boat or is dissatisfied with esent
it can be installed in boats a m
for a forward cock-pit. ht a
running in oil—total abse pro
and as husky as a bulld bui

Advertising Index will be found on page 384

CROSS REDUCTION GEAR

Premier Position among the things to make their debut New York Motor Boat Show

The MISSING LINK

ve searched for the Missing Link between a high speed motor with short over-all
m vibration and economy in fuel consumption and space and a propeller wheel
ndle a cruiser or large runabout under all conditions.

to have some mechanism between the engine and the propeller wheel to reduce
d to increase the torque in order that the engine will turn a wheel sufficiently

ce in building forward Gear Boxes for all types of racing boats, we have developed
duction Gear built to the same exacting specifications.

ardened and Lapped gears—Ball-bearing throughout—Thrust
ed on Fluid Oil—Provision for oil cooling.

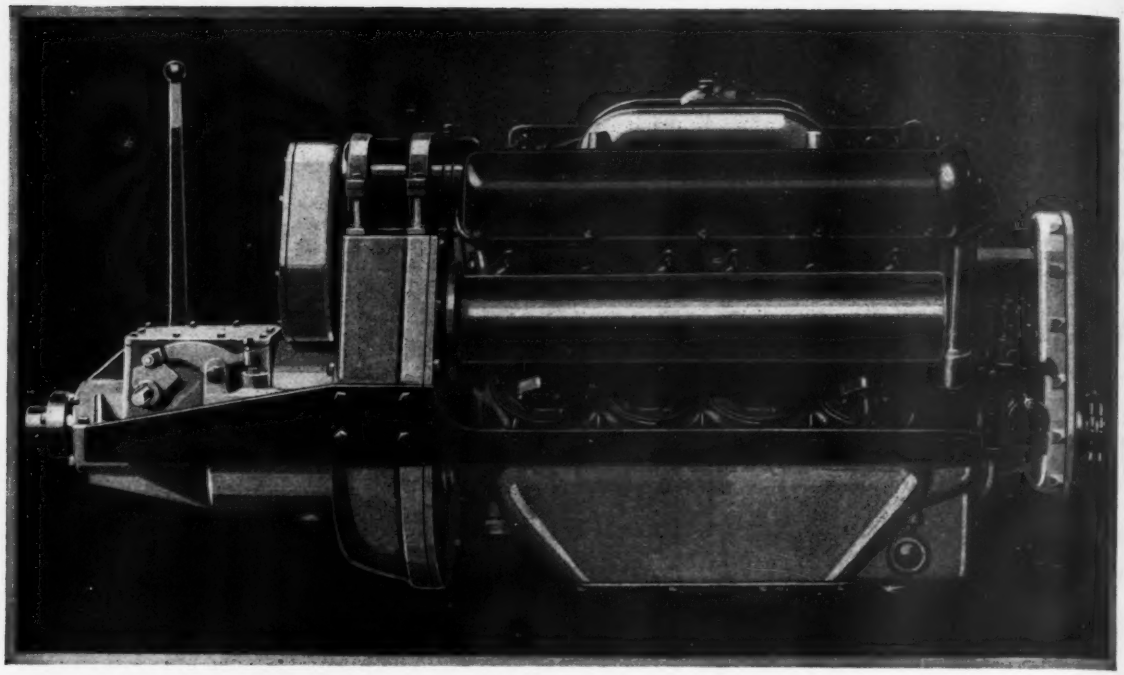
WE SOLICIT YOUR INQUIRY

CROSS REVERSE GEAR

BUILDERS' TYPE A ENCLOSED

l appeal to the boat builder, also to the owner who contemplates equipping his
sent reverse gear. Compact and short in length for the H. P. to be transmitted,
a minimum of space is available—particularly is this true where the design calls
ht aluminum housing—ball bearing job throughout—a velvety clutch—gears
propeller drag—85% of motor speed in reverse—built as accurately as a watch
built with interchangeable parts—easily accessible.

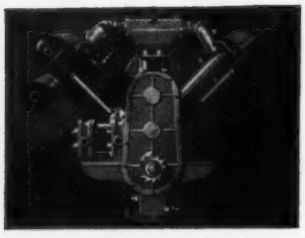
THIS TYPE MANUFACTURED IN FOUR MODELS



The New CROSS-KYSOR
Worthy of the finest craft

This new light-weight, high-speed marine motor—the Cross-Kysor 220 H.P. Super-Marine is preeminently the foremost engine of its kind from every angle—performance, design, construction and value. It is absolutely a leader in its class.

All the features that every speed-boat owner has wished for are now incorporated in this marvel of marine motor design—accessibility, durability, stiffness and rigidity, universal servicing of parts, ease of starting, uniformity of timing and ball bearing throughout—all to be found in this motor.



End View

CROSS KYSOR
SUPER-MARINE
220 H.P. ENGINE

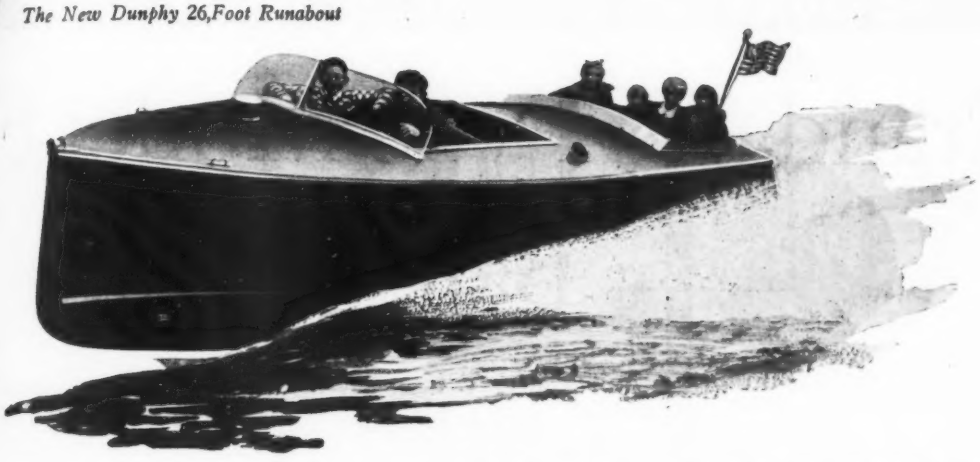
We will be pleased to send full information and price on request

CROSS GEAR & ENGINE COMPANY
3260 Bellevue Avenue, Detroit, Michigan, U. S. A.

"A BRUTE FOR POWER AND A GLUTTON FOR SPEED"

Advertising Index will be found on page 384

The New Dunphy 26,Foot Runabout



Two of the Best Boats Ever Built by Dunphy

Some of the finest private boats in America have been constructed by Dunphy. Now you are offered two of the best boats ever built by Dunphy—and they are most attractively priced.

The New Dunphy 26 Foot Runabout

Handles with the speed, ease and convenience of a fine motor car. Comfortable and seaworthy under all conditions.

Plenty of room for ten passengers. Forward cockpit has two leather upholstered seats. Steering wheel and all controls are operated from forward seat, and the windshield shuts off the breeze. The rear cockpit has one leather upholstered seat and two wicker chairs. The hull is double-planked and mahogany, brass and copper fastened.

Powered with dependable 6-cylinder 100 H.P. Marine Motor. Makes better than 30 miles per hour—and on special order equipped to do 45 miles guaranteed. Motor with electric starter installed amidship under flush hatches.

$3,200 *F.O.B. Eau Claire*

The New Dunphy Sand Dab

The New Dunphy Sand Dab

The Sand Dab beaches anywhere, the propeller is protected. Shallow draft tunnel stern.

Draws only 11 inches. Slips over bars and shallows. Eases into coves and inlets.

Length—18 feet. Room for nine passengers. Equipped with 4-cylinder 15 H.P. Universal Motor with electric starter. Makes 15 miles per hour. Hull is cedar planked, brass and copper fastened, and mahogany finished. Complete in every way.

$1,125 *F.O.B. Eau Claire*

If you desire a special purpose craft, just tell us your requirements. For many years we have designed and built boats to specifications and are equipped to serve you to your entire satisfaction.

All types of motor boats, outboard motor boats, canoes and row boats are included in the Dunphy line. Write for free, illustrated catalog that gives complete information.

A few territories open for progressive representatives.

Dunphy Boat Mfg. Co.

Dept. C. 3 Eau Claire, Wis.

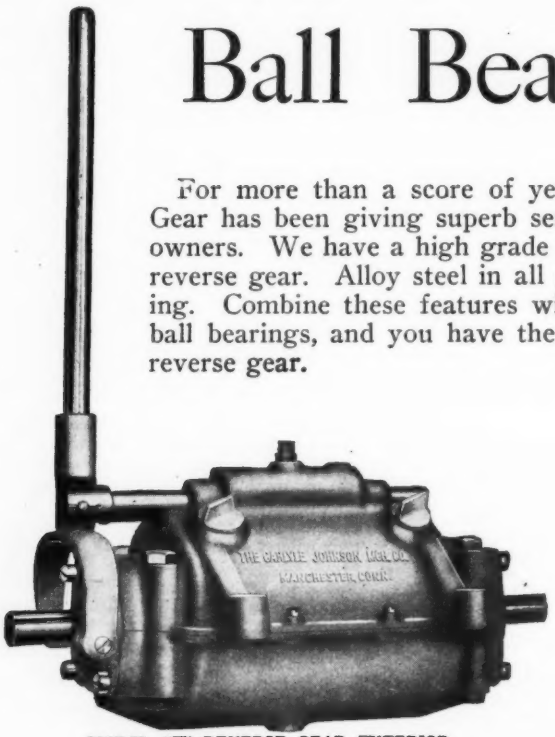
DUNPHY

"famous for boats for forty years!"

THE JOHNSON MARINE REVERSE GEAR

Standard Type Model F, Ball Bearing

For more than a score of years the Johnson Gear has been giving superb service to satisfied owners. We have a high grade enclosed type of reverse gear. Alloy steel in all gears and shafting. Combine these features with easy-running ball bearings, and you have the highest type of reverse gear.



MODEL "F" REVERSE GEAR EXTERIOR

Johnsons Lead the Whole Field in Reverse Gear Quality and Value

Superior construction and material account for the Johnson's fine reputation. Best alloy steel used in all gears and shafting, properly hardened and heat treated.

Double row ball bearings on the main drive shafts in each end of the case, the propeller end being a double thrust bearing. Compare carefully this construction with any other on the market before placing your order.

The heart of the Johnson Gear is the world-famous Johnson Friction Clutch, double type. Quality has been the first consideration in building this gear—price secondary.

Motor manufacturers, let us show you how simple it is to make a unit power plant out of your motor with a Johnson Gear. Use the Johnson Marine Reverse Gear. Complete data on request.

Write for Catalog No. 25

THE CARLYLE JOHNSON MACHINE CO. MANCHESTER CONN.

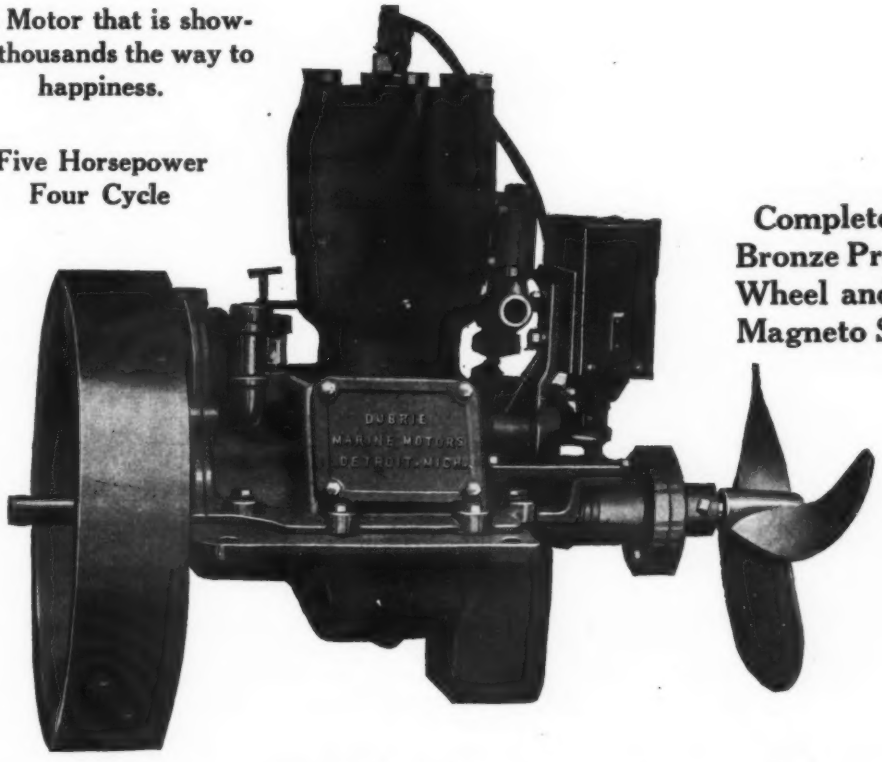
Advertising Index will be found on page 384

No Other Motor Gives Equal Value

DuBrie

The Motor that is showing thousands the way to happiness.

Five Horsepower Four Cycle



Complete with Bronze Propeller Wheel and Wico Magneto System

THERE is true value in the DuBrie. Nothing but the best materials go into it—materials selected for their proved reliability and durability. This together with the superior design and workmanship of the DuBrie explains why it will outlast and outrun ordinary motors by months and miles. The DuBrie thrives on rough going—never falters or whimpers as long as there is fuel in the tank. Its power is honestly rated and it uses less gas than any other motor in its class. The practicability, adaptability and unfailing service of this wonderful little motor are endorsed by DuBrie owners all over the world. It is sold complete and ready to run—when you purchase a DuBrie you do not have any extras to buy.

Write today for descriptive literature

DU BRIE MARINE MOTORS

5626 McGraw Avenue **Detroit, Michigan**

Louisiana Distributor: Stauffer, Eshleman & Co., New Orleans, La.
British Isles: Associated Manufacturers, London, England
New Zealand: A. J. Williams, 1 Redmond Street, Ponsonby, Auckland, N. Z.
Other Foreign Countries: Melchor, Armstrong, Dessau Co., 116 Broad St., N. Y.
Sutter Bros., New York, N. Y.

America's Leading Marine Engine Builders

(Continued from page 286)

GASOLINE

Winton Engine Works
2116 West 106th St., Cleveland, Ohio

WINTON

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R. P. M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
W6	80	6½x9	6	4	500	5900	Force	Winton	Air	Bosch	Champion	Zenith
W5	125	8 x11	6	4	450	10000	Force	Winton	Air	Bosch	Champion	Zenith
11	200	9½x14	6	4	425	19000	Force	Winton	Air	Bosch	Champion	Zenith
106	200	7 x8	6	4	1000	5000	Force	Joes	Leese-Neville	Bosch	Champion	Zenith
124	180	6 x7	6	4	1300	2400	Force	Joes	Leese-Neville	Bosch	Champion	Zenith
120	350	7¼x8½	6	4	1350	5000	Force	Joes	Leese-Neville	Bosch	Champion	Zenith

GASOLINE GENERATOR SETS

Model	K. W.	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Ignition System	Spark Plugs	Carburetor
W17	5	3x4	4	4	1000	900	Force	Bosch Magneto	Champion	Zenith
W2	7½	3x4	6	4	1200	1380	Force	Bosch Magneto	Champion	Zenith
W2A	10	3x4	6	4	1300	1380	Force	Bosch Magneto	Champion	Zenith

DIESEL

Winton Engine Works
2116 West 106th St., Cleveland, Ohio

WINTON

Model	Horse Power	Bore and Stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse Gear	Starting Device
105	100	6½x 8	6	4	600	7700	Force	Winton	Air
114G	150	8x11	6	4	450	13500	Force	Winton	Air
114R	150	8x11	6	4	450	13000	Force	Direct Reversible	Air
117	175	8½x11	6	4	450	13000	Force	Direct Reversible	Air
114-4	110	8½x11	6	4	450	11000	Force	Winton	Air
111	200	9½x14	6	4	350	21000	Force	Direct Reversible	Air
116	300	10x14	6	4	450	21000	Force	Direct Reversible	Air
W35	225	11x14	6	4	250	44000	Force	Direct Reversible	Air
107	375	13¼x18	6	4	275	64000	Force	Direct Reversible	Air
W40	500	12 15/16x18	8	4	250	90000	Force	Direct Reversible	Air
115	500	14x15	6	4	450	11000	Force	Direct Reversible	Air

American Builders of Outboard Engines

Caille Perfection Motor Co.
6210 Second Boulevard, Detroit, Mich.

CAILLE

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Carburetor
Liberty	2	2x2	2	2	1200	46	In fuel	Zenith
5 Speed	2	2x2	2	2	1600	45	In fuel	Zenith

Elto Outboard Motor Company
62 Mason Street, Milwaukee, Wis.

ELTO LIGHT TWIN

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
Outboard C	3	2¼x2	2	2	1400	50	Oil in gas			Atwater-Kent	Champion	Special
Outboard D	3	2¼x2	2	2	1400	50	Oil in gas			Atwater-Kent	Champion	Special

Evinrude Motor Company
Milwaukee, Wis.

EVINRUDE

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	Port	R.P.M.	Weight	Lubrication	Reverse gear	Starting device	Ignition system	Spark plugs	Carburetor
A Single	2	2⅝x2½	1	2	2	900	72	In fuel	Automatic	Own	Magneto	Champion	Evinrude
B Single	2	2⅝x2½	1	2	2	900	68	In fuel		Own	Magneto	Champion	Evinrude
AT Single	2	2⅝x2½	1	2	2	900	78	In fuel	Automatic	Own	Magneto	Champion	Evinrude
A Heavy	3½	3¼x3	1	2	2	750	128	In fuel	Automatic		Magneto	Champion	Evinrude
B Heavy	3½	3¼x3	1	2	2	750	120	In fuel			Magneto	Champion	Evinrude
L A Big Twin	4	2⅝x2½	2	2	2	1200	86	In fuel	Automatic	Own	Magneto	Champion	Evinrude
L B Big Twin	4	2⅝x2½	2	2	2	1200	80	In fuel		Own	Magneto	Champion	Evinrude
L A T Big Twin	4	2⅝x2½	2	2	2	1200	94	In fuel	Automatic	Own	Magneto	Champion	Evinrude
N Sport Twin	2	2 x1½	2	2	3	2100	42	In fuel	Automatic	Own	Magneto	Champion	Evinrude
N B Sport Twin	2	2 x1½	2	2	3	2100	56	In fuel	Automatic	Own	Magneto	Champion	Evinrude

Sears, Roebuck & Co.
Chicago, Philadelphia, Dallas, Kansas City, Seattle, U. S. A.

MOTORGO

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Starting device	Ignition system	Carburetor
Row boat	2	2⅝x2½	1	2	1000	50	Splash	Rope	Magneto	Valve

Johnson Motor Company
South Bend, Ind.

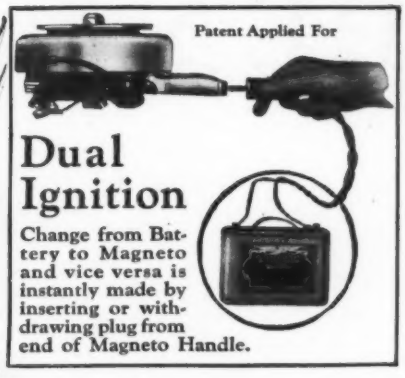
JOHNSON

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Starting device	Ignition system	Spark plugs	Carburetor
Light Twin	2½	2 x1½	2	2	2300	35	In fuel	Hand	Own	A. C	Own
Light Single	1½	2 x1½	1	2	2500	26	In fuel	Hand	Own	A. C	Own
Big Twin	6	2⅞x1¾	2	2	2300	85	In fuel	Hand	Own	A. C	Own

Lockwood-Ash Motor Company
Cor. Jackson and Douglas Streets, Jackson, Mich.

L-A

Model	Horse power	Bore and stroke	No. of Cylrs.	Cycle	R.P.M.	Weight	Lubrication	Ignition system
Single	2	2⅝x2½	1	2	900	65	In fuel	Magneto
Twin	(-)	2¼x2	2	2	2300	55	In fuel	Magneto


Patent Applied For
Dual Ignition
Change from Battery to Magneto and vice versa is instantly made by inserting or withdrawing plug from end of Magneto Handle.

BE SURE the motor you buy starts easily and quickly; that it is easily controlled with speed variations forward and backward; that it has plenty of power—plenty of speed—twin cylinders to reduce vibration and is light enough to be easily carried. If you buy a motor combining all these factors you are bound to meet with complete satisfaction—you are bound to buy a

CAILLE DETROIT 5 Speed Twin

Has two forward and two reverse speeds accomplished mechanically by changing pitch of propeller blades. Changing from forward to reverse does not jerk you from your seat and rack the boat, but is made gradually. When set at neutral the boat stands still with motor running. No other motor provides such perfect control. The hand that steers controls all. And

Dual Ignition

provides both battery and magneto ignition—another exclusive Caille feature. Gives you the combined advantages of immediate starting with battery—economy and snappy speed with magneto. Change from either ignition is made by inserting or withdrawing a plug from end of magneto handle.

Pay as You Play

Make a down payment of only $37.00. Take care of the balance in monthly installments. Write for catalogue and name of nearest Caille dealer.

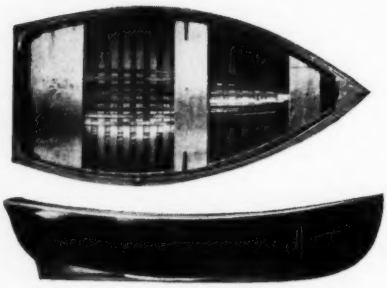
THE CAILLE PERFECTION MOTOR CO.
6214 2nd Boulevard **Detroit, Michigan**

CAILLE 5 SPEED TWIN

PRONOUNCED "CAIL"

PENN YAN Boats for 1926

The new Penn Yan Runabout, a fast, dry, seaworthy and comfortable boat. Length, twenty-nine feet.



Canvas-Covered Penn Yan Dinghies are light and cannot leak. Three models, 8 ft., 70-lb. Junior; 8 ft., 80-lb. Standard, 10-ft., 90-lb. Standard.

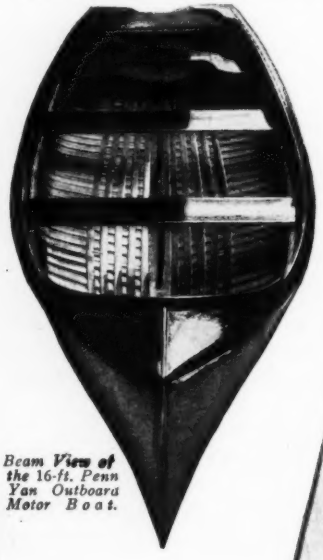
IN A Penn Yan Boat, dinghy, runabout, outboard motor or sail boat, you get the best in design and construction. They are excellent in appearance and reliable in service.

Penn Yan products are built on a mass production basis and are low in price. We are the builders of the Coast Guard dinghies.

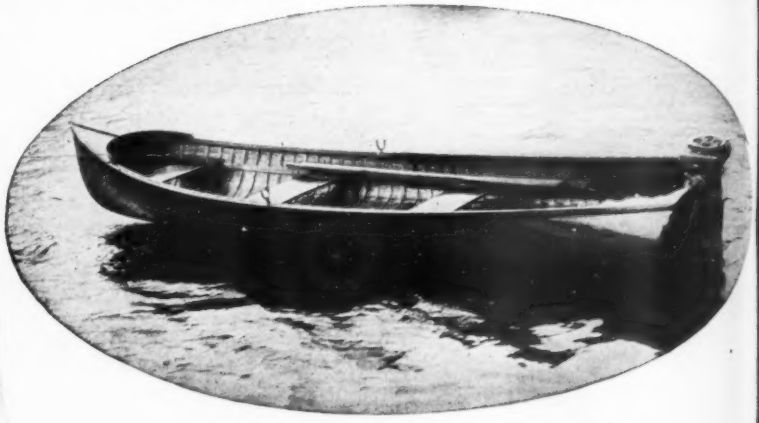
Write for descriptive literature.

PENN YAN BOAT CO., Inc.

PENN YAN NEW YORK

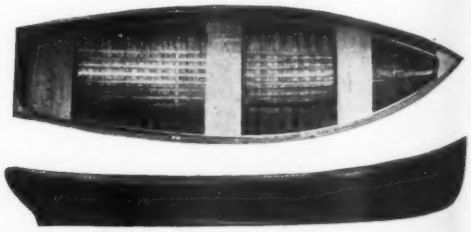


Beam View of the 16-ft. Penn Yan Outboard Motor Boat.



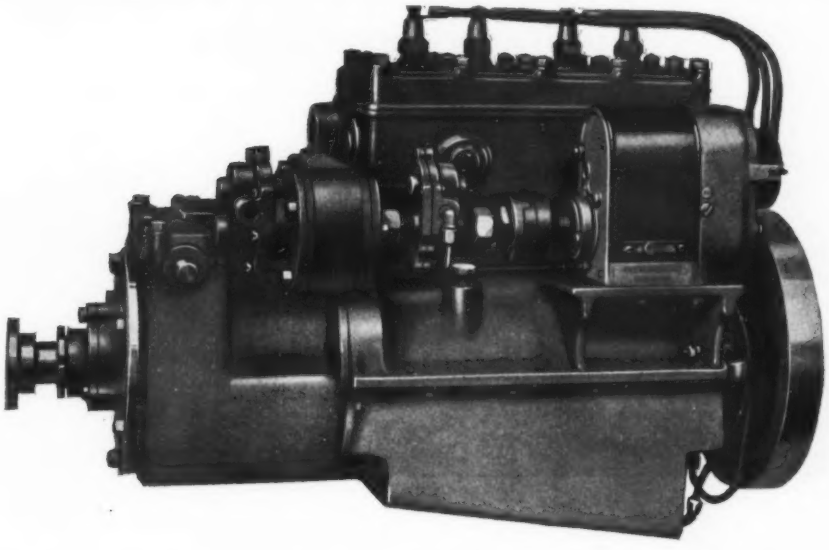
Penn Yan 16-ft. V-Bottom Outboard Motor Boat.

The Penn Yan 8 ft. Sailing Dinghy.



Penn Yan Rowboats. New in design and construction. Absolutely and permanently water tight. 12 and 14 ft. lengths.

Advertising Index will be found on page 384



AT LAST!

THE fulfillment of your desire for an Ideal small boat engine is now attainable.

We announce with satisfaction, unquestionably, the finest, most sensational, four cylinder baby marine engine of the day.

The one motor you have always looked for suitable for the finest yacht tenders, or installed in any small boat, instantly converts it into a craft of pleasure and lasting satisfaction.

This little 44 Cu. In., four cylinder, four cycle, 2¼ x 2¾ inch motor is equipped with high tension magneto, inclosed reverse gear, Timken adjustable taper roller bearings on crankshaft, camshaft, and reverse gear shaft.

A product engineered and manufactured worthy of your admiration.

10 B. H. P. at 2500 R. P. M.

MODEL H-4. Weight 190 lbs. Price complete $300.00

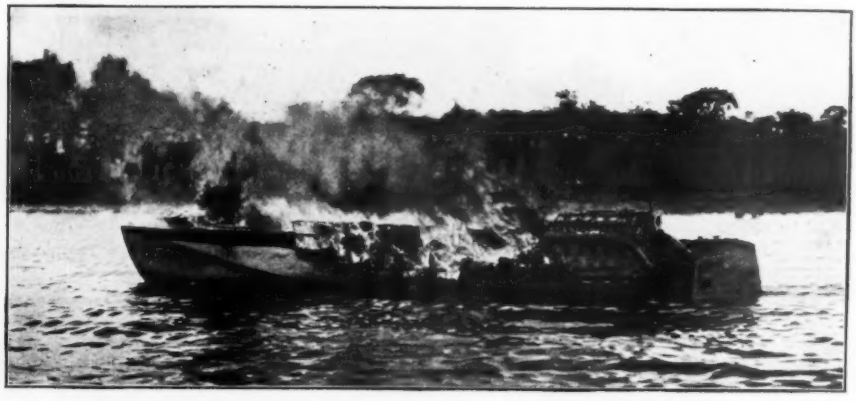
Some territory still open. Wire for reservations

HALLETT MANUFACTURING CO.

LOS ANGELES, CALIFORNIA

P. O. Box 192, HYDE PARK STATION

Fortify for Fire Fighting



Safety Demands that Every Motor Boat be Equipped with Pyrene

WHEN a fire starts in a motor boat it must be controlled instantly if life and property are to be protected from serious injury and damage.

With a PYRENE Hand Fire Extinguisher, fires in motor boats can be put out at the start. Thousands have proved that there is safety afloat with PYRENE in the boat.

Prepare to protect your life and your motor boat property by installing PYRENE Hand Fire Extinguishers immediately.

PYRENE is now standard equipment on many leading makes of motor boats because the makers know that it affords absolute security and protection.

PYRENE has been the standard fire-fighting equipment on motor boats for 15 years.

PYRENE is approved by the U. S. Steamboat Inspection Service, which requires fire extinguishers on motor boats.

PHOMENE (Foam Type—2½ gal.) Fire Extinguishers are the ideal fire-fighting equipment for large oil-burning boats.

Specify PYRENE for your new boat.

PYRENE MANUFACTURING COMPANY
Makes Safety Certain
NEWARK, N. J.

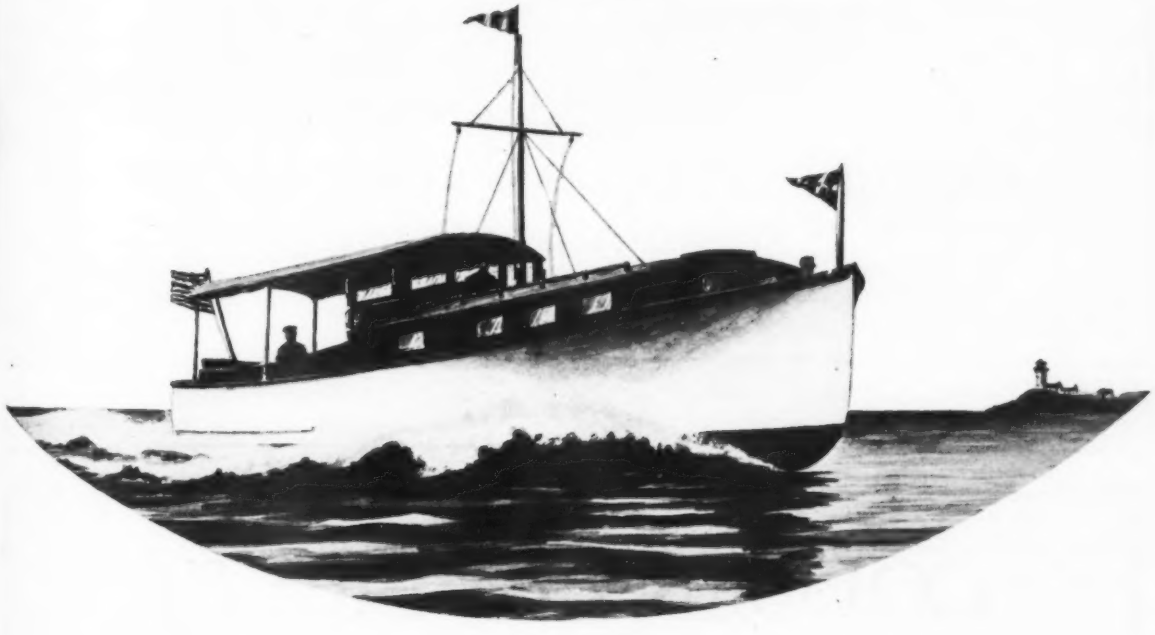
Pyrene
KILLS FIRE
SAVES LIFE

Advertising Index will be found on page 384

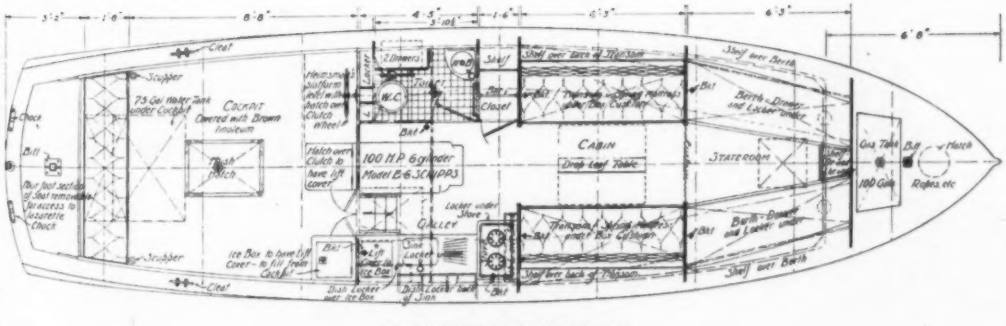
STANDARD THIRTY-EIGHT FOOT

"Lawley Built"

CRUISER



AT LAST! THE IDEAL SMALL CRUISER. Developed as the result of 59 years' experience building America's finest pleasure craft. Able and Seaworthy. Speed, Comfort and Pleasing appearance combined with LAWLEY workmanship. Four *Real* Berths, Toilet, Galley, Engine Room and Commodious Cockpit all in 38 feet. Six cylinder Model E-6 Scripps Motor, 100 H.P. Suitable for Florida, coastwise cruising or the Great Lakes. Dimensions: 38 feet over all, 10 feet 4 inches beam, 2 feet 9 inches draft. **SIX ONLY AVAILABLE FOR SPRING DELIVERY.**



ARRANGEMENT PLAN

See this boat at the New York Motor Boat Show

GEO. LAWLEY & SON, CORPORATION

NEPONSET, MASS.

Complimentary to

Yacht Masters' and Engineers' Association of Massachusetts

By

GEORGE LAWLEY & SON CORPORATION

NEPONSET, MASSACHUSETTS

COUSENS & PRATT

SAILMAKERS

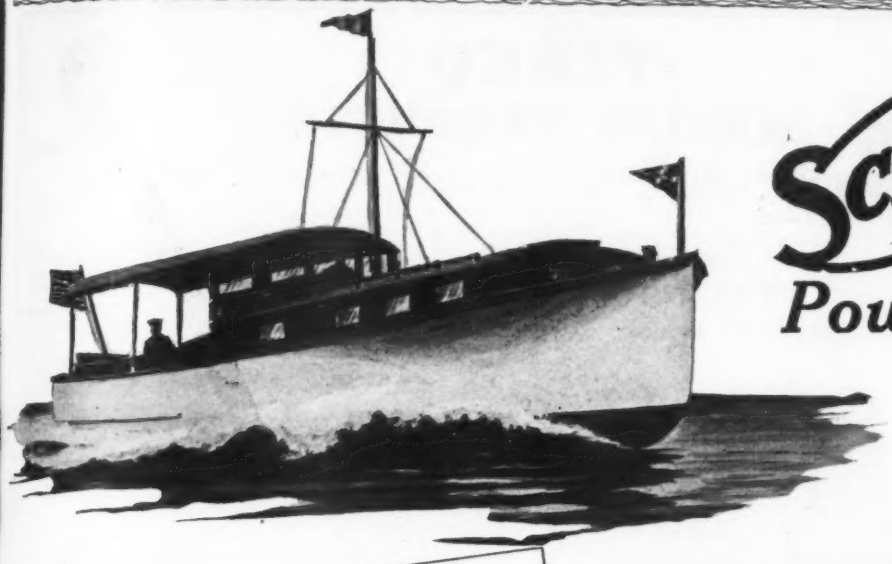
SINCE the foundation of Geo. Lawley & Son Corp., many years ago, we have had the pleasure of doing the bulk of the canvas work on Lawley boats. We say pleasure, because Lawley builds such fine craft, and it is indeed a gratification to have our product associated with Lawley boats. The canvas work on the Lawley thirty-eight foot standard cruiser is also furnished by us.

COUSENS & PRATT

Sails—Canvas Goods—Boat Covers—Awnings—Flags

493 C STREET BOSTON, MASS.

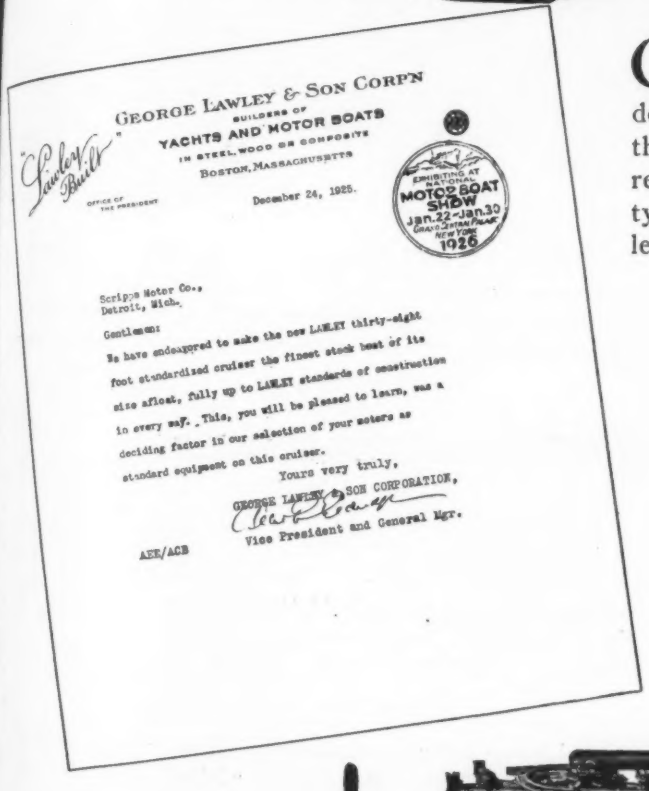
STANDARD "Lawley Built" 38 FT. CRUISER



Scripps Powered

GEORGE LAWLEY & SON CORPORATION of Neponset, Mass., designers and builders of this fine thirty-eight foot stock cruiser, have a reputation of using only the highest type of equipment in their boats. Lawley insists on proven quality.

The selection of the Scripps six cylinder, model E-6, marine engine as standard power equipment for the Lawley cruiser is further proof that Scripps power is the overwhelming choice of America's foremost builders of fine motor craft.



"Lawley Built"

GEORGE LAWLEY & SON CORPN

BUILDERS OF

YACHTS AND MOTOR BOATS

IN STEEL, WOOD OR COMPOSITE

BOSTON, MASSACHUSETTS

OFFICE OF THE PRESIDENT

December 24, 1925.

EXHIBITING AT NATIONAL MOTOR BOAT SHOW Jan. 22 - Jan. 30 GRAND CENTRAL PALACE NEW YORK 1926

Scripps Motor Co.,
Detroit, Mich.

Gentlemen:

We have endeavored to make the new LAWLEY thirty-eight foot standardized cruiser the finest stock boat of its size afloat, fully up to LAWLEY standards of construction in every way. This, you will be pleased to learn, was a deciding factor in our selection of your motors as standard equipment on this cruiser.

Yours very truly,

GEORGE LAWLEY & SON CORPORATION,

Vice President and General Mgr.

AEE/ACB

SCRIPPS MOTOR CO.

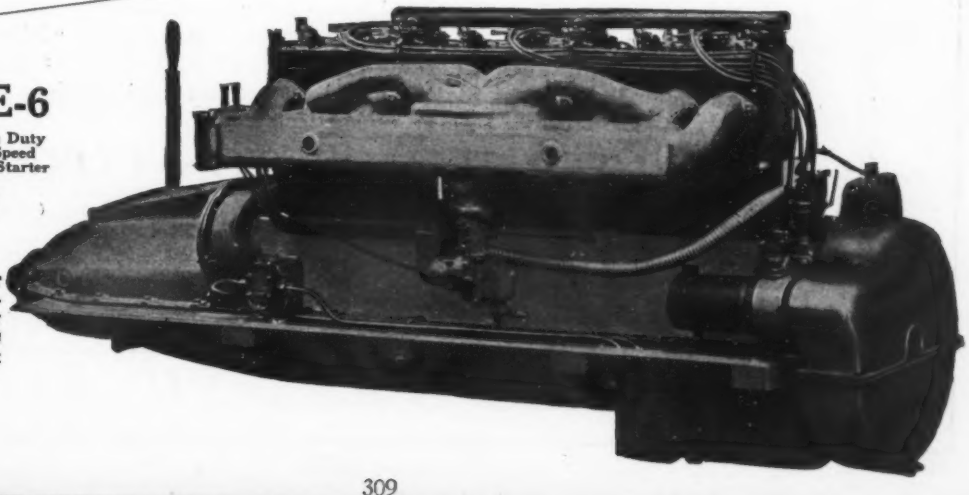
5819 LINCOLN AVENUE

DETROIT, MICHIGAN

Scripps E-6

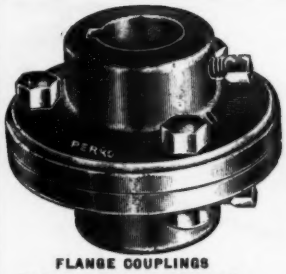
40-60 H.P., Medium Duty
60-100 H.P., High Speed
Including Electric Starter

$1750



There are seven other Scripps marine engines with a power range of 15 to 150 H.P. Two to six cylinders.

PERKO
MARINE PRODUCTS



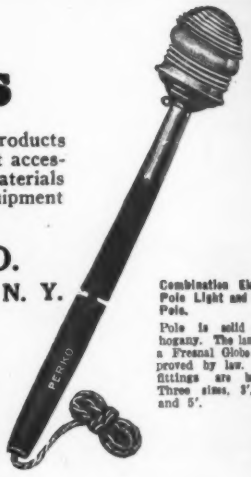
FLANGE COUPLINGS

Made from fine gray iron castings and accurately bored. These couplings are interchangeable. Can be used for joining shaft of two different sizes. Write for sizes.

EVERY boat owner should have the "Perko" Marine Products bulletin, showing a very wide line of high grade boat accessories. "Perko" products are made of the finest materials and are reasonably priced. They are used as standard equipment by the foremost builders of stock boats.

PERKINS MARINE LAMP CO.

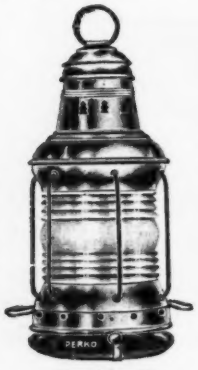
1943 Pitkin Avenue **Brooklyn, N. Y.**



Combination Electric Pole Light and Flag Pole.

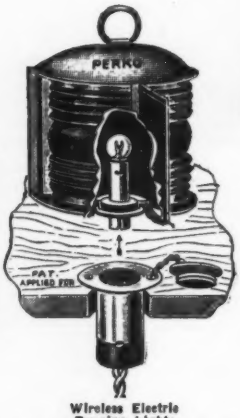
Pole is solid mahogany. The lamp is a Fresnal Globe approved by law. All fittings are brass. Three sizes, 3', 4' and 5'.

Class I
Combination Light
Oil or Electric
Made in both galvanized metal and brass. Fresnal Lens.

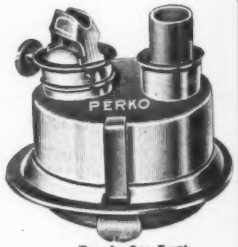


Class II or III
Anchor Lights
Oil or Electric
Made in both galvanized metal and brass. Fresnal Lens.

Class III
Side Lights
Oil or Electric
Made in both galvanized metal and brass. Fresnal Lens.



Wireless Electric
Running Lights
Made in brass only. Lights for all classes in stock.



Two-In-One Fount
Oil and Electric for all types of lights. Edliswan base socket or Edison base socket for larger lamps than Class 3.

We carry a Complete Line of Oil and Electric Running Lights, from Canoes to Ocean Liners

LAWLEY'S selection of the six cylinder SCRIPPS engine, as a worthy part of their fine stock boat, is not surprising when SCRIPPS reputation for reliability and service is considered.

AS SCRIPPS New England distributor it was our privilege to supply these engines. Similarly, we have furnished many New England yachtsmen with SCRIPPS engines and these men know that SCRIPPS is backed by real service.

WALTER H. MORETON CORP.

780 COMMONWEALTH AVENUE, BOSTON, MASS.

New England Distributors of Scripps Engines - Sales - Service

STANDARD "Lawley Built" 38 FT. CRUISER

Hyde Driven

The new Lawley 38 ft. standardized cruiser is equipped with a Hyde Turbine Type (TRUE SCREW) Propeller.

BY far the largest percentage of all standardized boats are driven by HYDE Wheels. Correct design, highest quality materials, superior workmanship and the HYDE guarantee against breakage tell why HYDE Wheels are the preferred.

12,000 PROPELLERS IN STOCK

The large stock of HYDE Propellers of all types and sizes on hand at convenient distributing points throughout the country guarantees prompt service at all times. You will find a HYDE representative in every important boating center. If your dealer cannot supply you order direct from us, immediate shipment assured.

Write for our booklet "Propeller Efficiency"

A postal will bring you a copy without charge or obligation.

HYDE WINDLASS COMPANY

BATH MAINE

STANDARD "Lawley Built" 38 FT. CRUISER

Through All These Years

KIRBY'S PAINTS

Have Been First in Quality

Anti-Fouling Paints
at Reasonable Prices

Green and Light Green Composites

Red Composite
The bottom paint which has found popularity from Maine to Florida

Old Style Red and Brown Copper
Any Fisherman will give the best story about these paints

New Bedford Bronze
Never Fouls—Never Fails

***For Yachts*—Flat and Gloss Yacht Whites**

Marine Outside White
A pure linseed oil paint for working boats

Deck Paints
10 Colors—Pure Linseed Oil

And a Paint for Anything That Floats

GEORGE KIRBY JR. PAINT CO.
NEW BEDFORD, MASS.

KELVIN & WILFRID O. WHITE CO.

111 Commissioners St. Montreal | 112 State St. Boston | 38 Water St. New York, N. Y.

Fine Nautical Instruments

Shelf Binnacles of Mahogany or Brass.
Pedestal and Stand Binnacles of all types and sizes.

Kelvin-White Pilot Glass

A Correct Compass
A Reliable Log
and **A Good Glass**
plus a little work on your part will make your landfalls sure.

Walker Excelsior Yacht Log

We can supply the Instruments!

NAVIGATION STUDENTS AHOY!

WE have recently purchased a large quantity of excellent sextants, Heath, Hughes and our own.

We have gone over these thoroughly and guarantee them—they all have Kew Observatory certificates. Their retail value is $125.00 to $150.00. We offer them to the yachting public at the following prices:

Hughes instruments ..... $40.00 ea.
Heath or Kelvin White..... 50.00 ea.

The chance of a lifetime to get an instrument of quality. Something you will enjoy owning and using.

Each instrument complete in polished mahogany box and fitted with plain tube, direct and inverting telescopes and star glasses. Silver arcs graduated to 10 min., open silver verniers graduated to 10 sec. Best quality mirrors and shade glasses, passing "Kew A" certificate. Many of these instruments are brand new and never been out of their boxes—the others slightly used but refinished.

See these at the Motor Boat Show—Space 79

STANDARD "Lawley Built" 38 FT. CRUISER

"Lawley Built"
OFFICE OF THE PRESIDENT

GEORGE LAWLEY & SON
BUILDERS OF
YACHTS AND MOTOR BOATS
IN STEEL, WOOD OR COMPOSITE
BOSTON, MASSACHUSETTS

December 23, 1926

Norfolk Paint & Varnish Co.,
Atlantic, Mass.

Gentlemen:

Our long experience with Norfolk waterproof varnishes on the bright work of our boats and with your Norfolk White Enamel has been one of incomparable satisfaction.

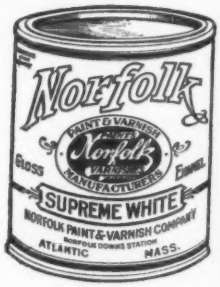
In the past our activities were devoted principally to the designing and building of custom yachts for a very exacting clientele. And now, in response to many requests for a Lawley designed and built standardized cruiser, we have just placed on the market a thirty-eight foot stock cruiser.

We were unusually careful in the selection of materials and equipment for this new boat, and when the varnish question came up the natural answer was Norfolk, as our experience tells us there is none better.

Yours very truly,
GEORGE LAWLEY & SON CORPORATION,
E. Edwards
Vice President and General Mgr.

AEE/ACB
Enclosures

Read this



NORFOLK PAINT & VARNISH CO.
Atlantic, Massachusetts
NORFOLK DOWNS STATION

NORFOLK

ELGIN *Unit* CONTROL

FOR

The Better Built Boats

ELGIN *Unit* Control gives the owner a feeling that he has a Modern Boat. He knows the builder of his craft is Up To Date and is further assured that it is not only modern in design, but that the builder's ideas of construction are ultra modern.

Houseboat, cruiser, runabout or hydroplane will live up to your expectations longer with lower upkeep if Elgin equipped. Accurate knowledge of motor speed, cooling, oiling and electrical systems means *Unit* Control. There is but one *Unit* Control—Elgin.

See Elgin *Unit* Control *on* The Better Boat *at* The National Show *New York January 22-30, 1926*

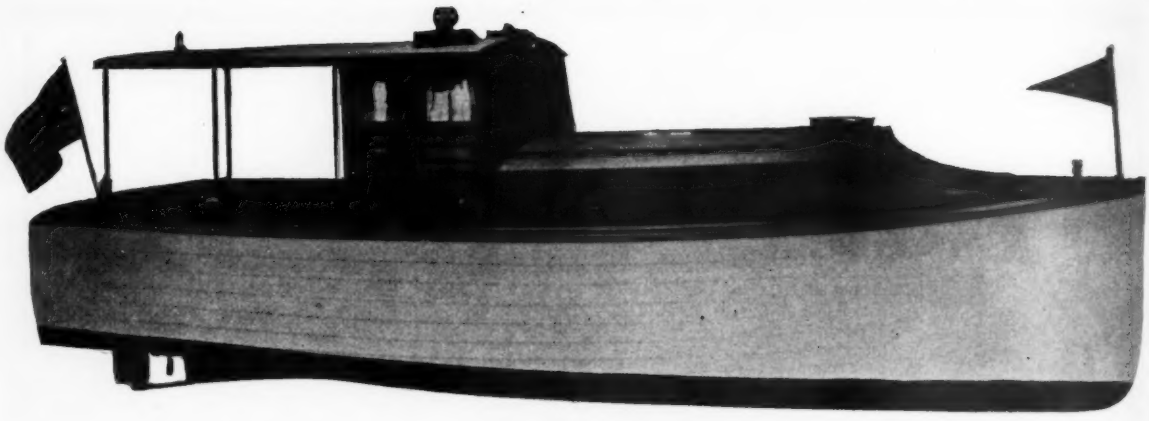
The Elgin Chronometric Tachometer is built by the world's largest builders of precision timekeepers. Their skill and knowledge of precision work is reflected in the Elgin Tachometer government Type-C. These qualifications insure accuracy, durability and years of uninterrupted service.

Tachometer Division

Elgin National Watch Co.

86 East Randolph Street

CHICAGO



32 FOOT STOCK

"KOBCOS KRUISER"

32′ long, 9′ beam, 29″ draft. One man control. Sleeps four. 5′ galley with sink, ice box and stove. Large toilet with lavatory, mirror and medicine chest. Four berths, 6′ 3″ x 24″. Clothes closet, drawers, plenty of storage space besides. 3″ clear spruce keel, ¾″ cedar planking; lap strake, ribs 1¾″ x ⅞″ steam bent oak, 9″ centers. Mahogany cabin and ventilating windshield with electric windshield cleaner. Trunk cabin; 6′ 2″ clear head room. Forward cockpit seats four persons. Movable awning aft, for fishing, if so desired. 5 Tube Atwater-Kent Radio with loud speaker.

Complete ready to cruise with all equipment afloat at Fair Haven, N. J., with 18-50 H.P. Continental-Van Blerck motor including electric starter and generator—$5300—Speed 12 M.P.H.; with 90 H.P. Continental-Van Blerck motor $5650—Speed 16 M.P.H.; with 120 H.P. Continental-Van Blerck motor $5950—Speed 20 M.P.H.

KOTICK BOAT COMPANY

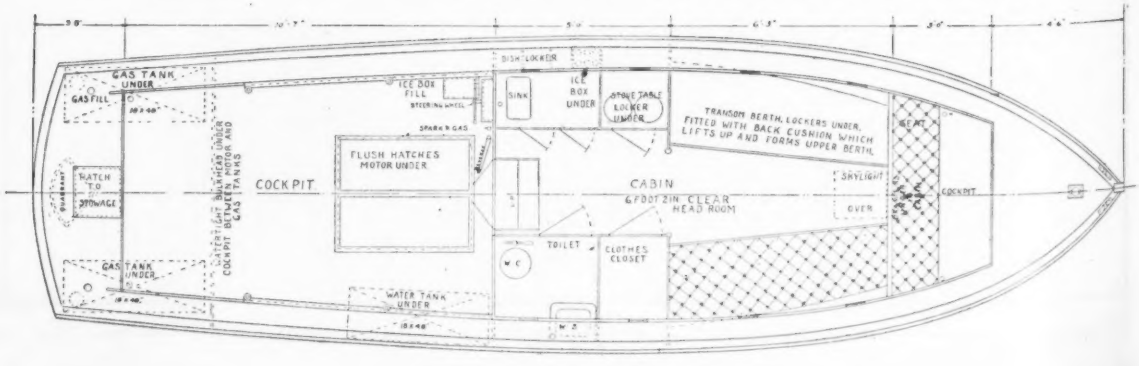
GEORGE W. HELME, *President*

FAIRHAVEN **NEW JERSEY**

KOBCOS KRUISERS

Phone: Red Bank 1759

PHILADELPHIA REPRESENTATIVE:
HAROLD C. ANDERSON, 434 REAL ESTATE TRUST BLDG.



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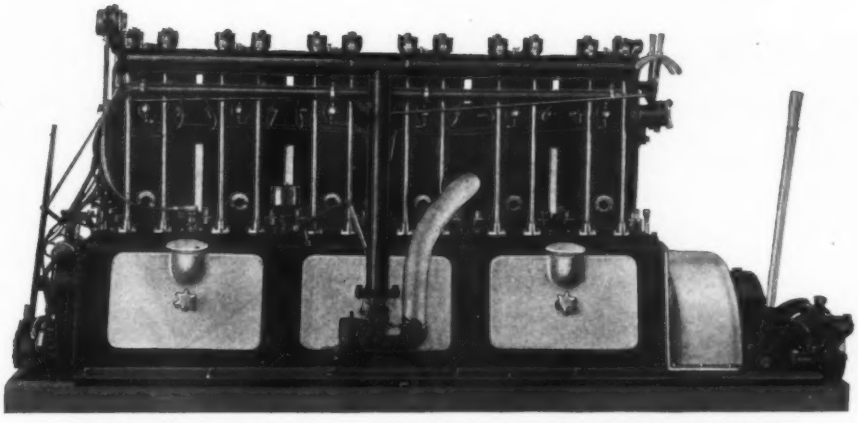
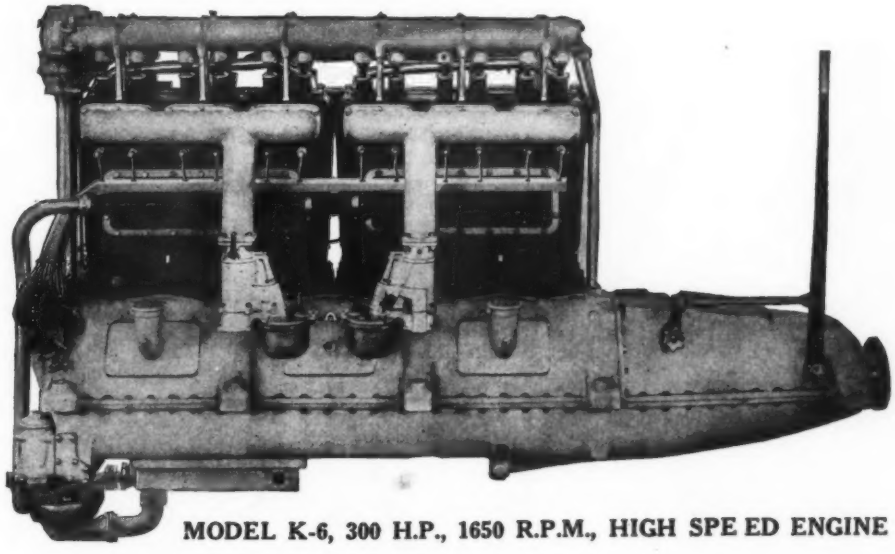
Murray & Tregurtha



MODEL H-6, 200 H.P., 800 R.P.M., MEDIUM DUTY ENGINE

M & T Engines Now Made in the Following Sizes:

Heavy Duty—Models F and G, 70 to 150 H.P.
Medium Duty—Models D, E, L, and H, 15 to 200 H.P.
High Speed—Models K and J, 300 and 400 H.P.



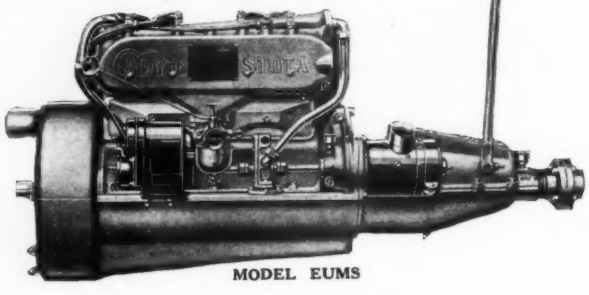
MODEL K-6, 300 H.P., 1650 R.P.M., HIGH SPEED ENGINE

MURRAY & TREGURTHA PLANT,
ATLANTIC, MASS.

CADYFORD

The Motor with the Universal Service

CONSIDERING quality, durability and completeness, the Cadyford is the lowest priced motor of its kind on the market. It is the easiest 4 cylinder, 4 cycle motor to run and gives more than the average mileage per gallon of fuel. Practically all parts for this motor can be duplicated at any Ford garage or store that handles Ford parts.



MODEL EUMS

12-16 H.P., 4-cycle, 4-cylinder
Bore and Stroke, 3¾" x 4"
Weight: With Reverse Gear, 385 lbs.;
Without Reverse Gear, 325 lbs.

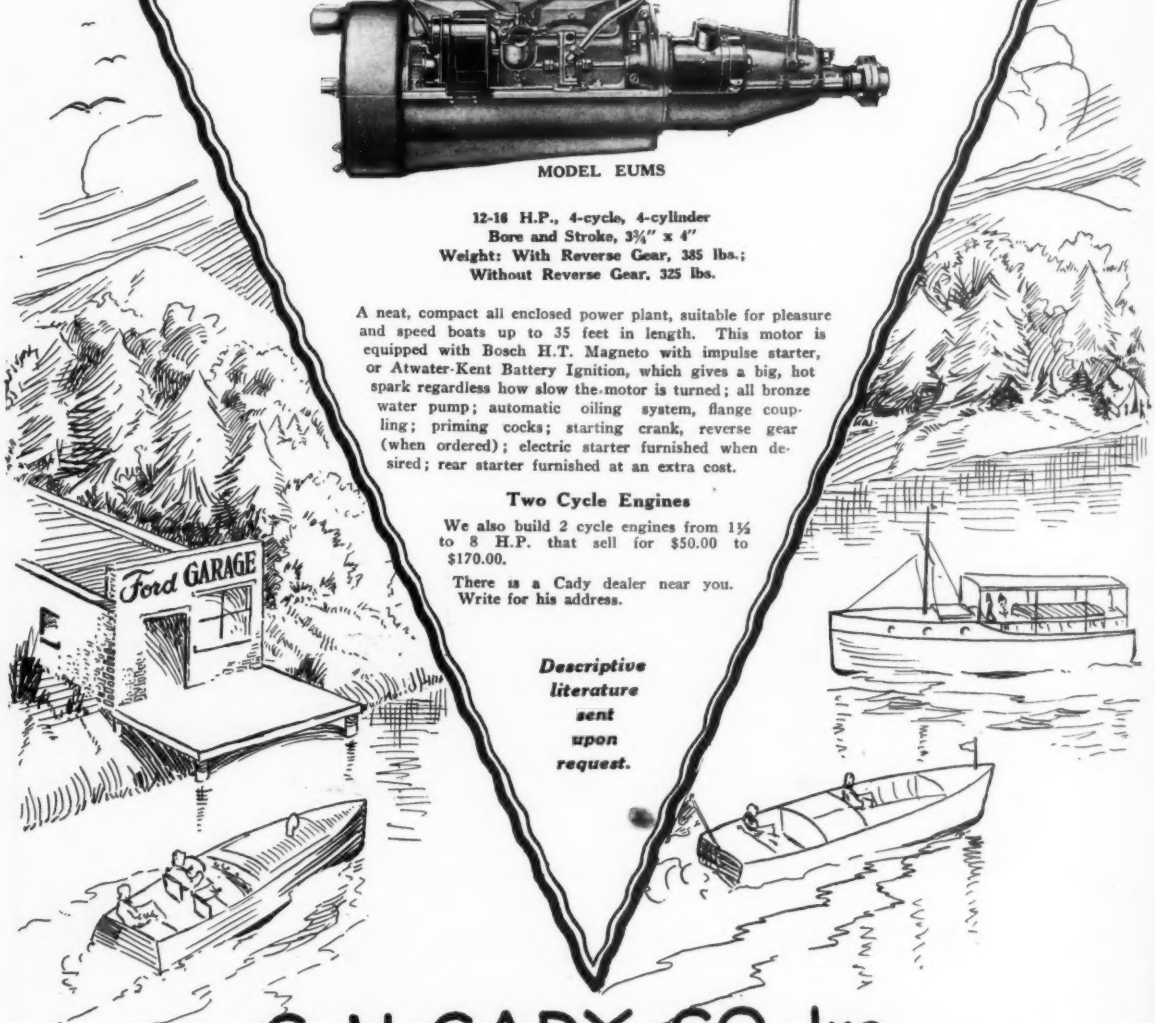
A neat, compact all enclosed power plant, suitable for pleasure and speed boats up to 35 feet in length. This motor is equipped with Bosch H.T. Magneto with impulse starter, or Atwater-Kent Battery Ignition, which gives a big, hot spark regardless how slow the motor is turned; all bronze water pump; automatic oiling system, flange coupling; priming cocks; starting crank, reverse gear (when ordered); electric starter furnished when desired; rear starter furnished at an extra cost.

Two Cycle Engines

We also build 2 cycle engines from 1½ to 8 H.P. that sell for $50.00 to $170.00.

There is a Cady dealer near you. Write for his address.

Descriptive literature sent upon request.



C. N. CADY CO., Inc.

304-B Center Street, Canastota, New York.

Pioneer Marine Engine Manufacturers ***Established 1883***

Advertising Index will be found on page 384

"IF BUILT BY SOUND ~ ITS SOUND"

The Water-King

28 FOOT CRUISER

SPECIFICATIONS

Length	28' 0"
Beam	8' 0"
Draft	2' 6"

Sleeping accommodations for four people. Spacious Galley equipped with stove, icebox and galley sink.

Complete lighting equipment, closet space, toilet and wash basin.

Powered with a BUFFALO marine engine, four cylinder, 14-30 H.P., this cruiser has a speed of 10 to 12 miles per hour.

Detailed Specifications will be sent upon request.

"IF BUILT BY SOUND-ITS SOUND"

The Water-Pal

20 FOOT RUNABOUT

SPECIFICATIONS

Length	20' 0"
Beam	5' 10"
Draft	1' 3"

May be had with one of two marine engines as standardized equipment.

Model "Z" GRAY marine engine, four cylinder, 14-22 H.P., equipped with electric starter, generator and reverse gear, this runabout has a speed of 16 to 18 miles per hour.

Bar Ford motor equipped with water pump and timer in one unit, auxiliary oiling system, special universal and sleeve to take propeller shaft, electric starter and generator, this runabout has a speed of 15 miles per hour.

Detailed Specifications will be sent upon request.

The "Winning Blood" of the latest Sound achievements.

WATER KING
AND
WATER PAL

has firmly established these aces of water craft in the hearts of boating enthusiasts who answer to the speed and rejoice in the beauty of a thoroughbred.

Fast becoming the favorites of the water-ways, the "Water King" and "Water Pal" are the best boats available at their price, with particular reference to construction, equipment and low cost of operation.

They are built with "Sound" methods, "Sound" workmanship and "Sound" materials.

The distinctiveness of "Sound" water craft has been attained by adhering to the "Sound" Ideal which characterizes the "Built by Sound" quality, workmanship and performance.

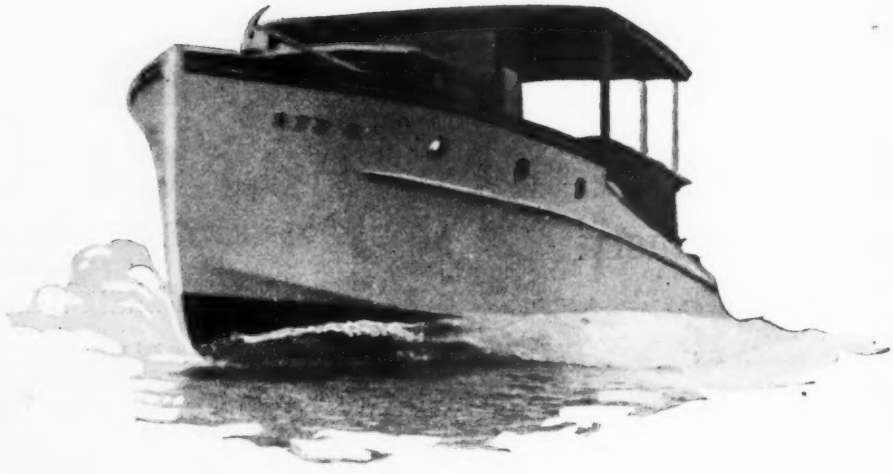
To those interested we will be pleased to send descriptive literature and detailed information upon request.

We offer an attractive opportunity to responsible Dealers—Write for our agents' agreement.

THE SOUND MARINE AND MACHINE CORPORATION

MAMARONECK NEW YORK

TOPPAN-BUILT



KERMATH POWERED

SPEEDY, seaworthy, staunch—the Sea Crest Express Cruiser appeals strongly in its design and construction to the sportsman-yachtsman group who know unerringly the lines of a thoroughbred. The Sea Crest embodies just those much sought attributes. Speed, sporting appearance and genuine comfort mark this fast cruiser. It is powered with the famously reliable 6-cylinder 100 H.P. high speed Kermath Marine Motor.

A 23 Mile an Hour Seagoing Express Cruiser

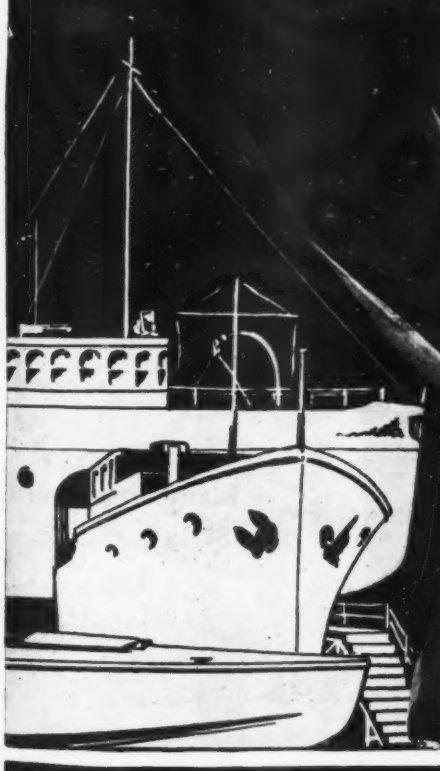
PRICE $4950 ***F. O. B. Medford, Mass.***

TOPPAN BOAT & ENGINE CO.

MEDFORD, MASSACHUSETTS

Advertising Index will be found on page 384

The Finishing Touch at the Show—



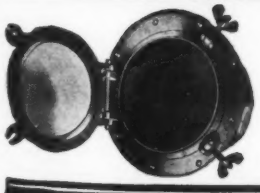
Carpenter Fittings on your boat complete the picture

Carpenter Supplies and Equipment on your boat insure reliable service, comfort and economy.

Our 1926 Catalog covers everything any craft will need.

Send for it.

CARPENTER MARINE SPECIALTIES



GEO·B·CARPENTER & CO.
MARINE SUPPLIES
Sailmakers and Riggers
200 W. Austin Avenue, Chicago

Any Gasoline or Fuel Oil Is Better After Being Clarified by the

BOSWORTH FILTER

Prevents Fuel Stoppage and Eliminates All Troubles due to Water, Dirt or Other Impurities in your Fuel

FOUR SIZES

BRASS

No. 125—⅛	$ 5.00
No. 250—¼	7.50
No. 375—⅜	10.00
No. 500—½	20.00

ALUMINUM

No. 125—⅛	$ 7.50
No. 250—¼	11.25
No. 375—⅜	15.00
No. 500—½	25.00

Manufactured of
SOLID BRASS
AND
ALUMINUM

Furnished in Any Mesh Desired

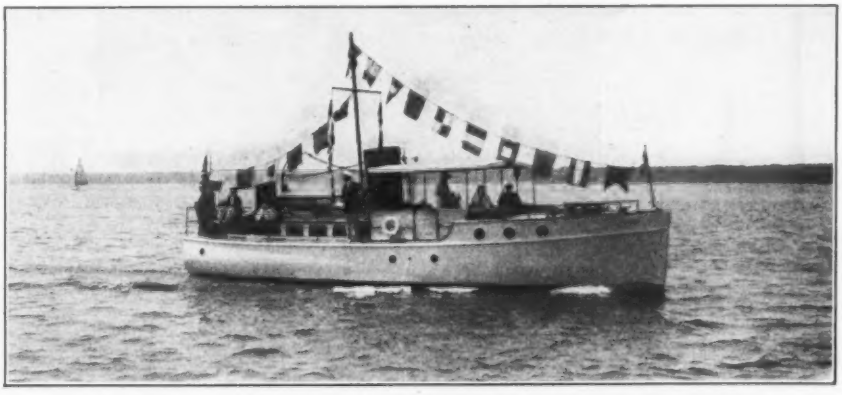
BOSWORTH FILTER COMPANY, Inc.

15 Wilbur Avenue — Long Island City, N. Y.

Advertising Index will be found on page 384

Peerless

Any boat owner may have the same lasting satisfaction that Commodore Vincent has found by installing a PEERLESS. These engines are designed and built to give reliable and efficient motor performance.



"MASKEE," OWNED BY COMMODORE HENRY VINCENT

HENRY B. VINCENT
COMMODORE
JOHN R. METCALF
VICE COMMODORE

CHARTERED 1866

ERIE YACHT CLUB

R. J. KINNEY
SECRETARY

WM. SUPPLEE
REAR COMMODORE
HARRY HOLMES
FLEET CAPTAIN

Peerless Marine Motor Company
Buffalo

ERIE, PA., 21 September, 1925

Dear Mr Grimm:

I have just returned from a long cruise in the MASKEE with the new Peerless Six, Medium Duty, 60-100 H.P. motor which was installed in the spring. It gives me great pleasure to say that under every circumstance, in good weather and bad, and on runs short and long, the motor has functioned perfectly.

We are able to get better than 10 M.P.H. at less than 800 R.P.M. tho, as you will remember, the MASKEE'S dimensions of 44 x 12, and her heavy construction, are not condusive to speed!

The dependability and flexibility of the Peerless under all conditions have added immeasurably to the comfort and joy of boating.

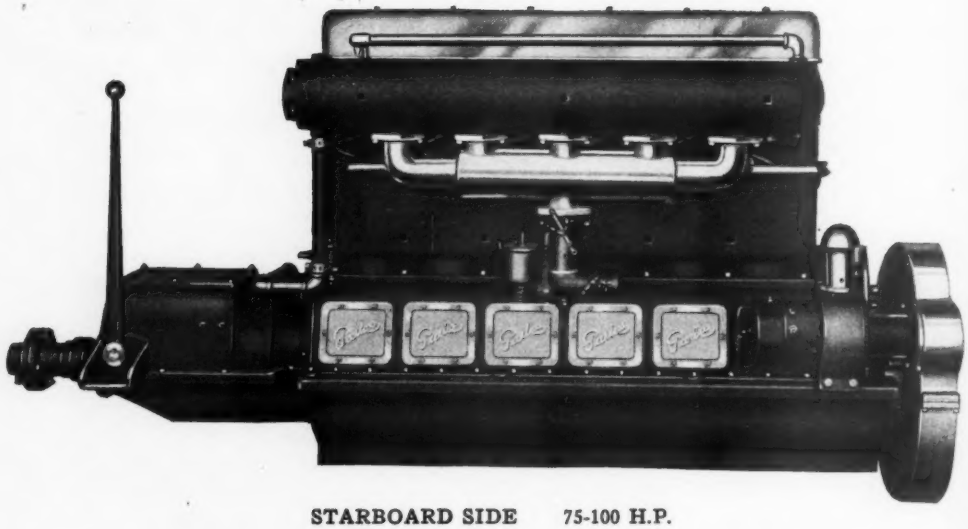
Yours sincerely,

Henry B Vincent

Commodore

CL

Peerless



STARBOARD SIDE 75-100 H.P.

6 cyl., 75-150 H.P. Bore 5", Stroke 7" Price $2150

Weight, Iron Base, 1500 lbs. Weight, Aluminum Base, 1250 lbs.

6 cyl., semi-high speed type, 175 H.P. at 1450 R.P.M., Price $2300

THE NEW PEERLESS LINE

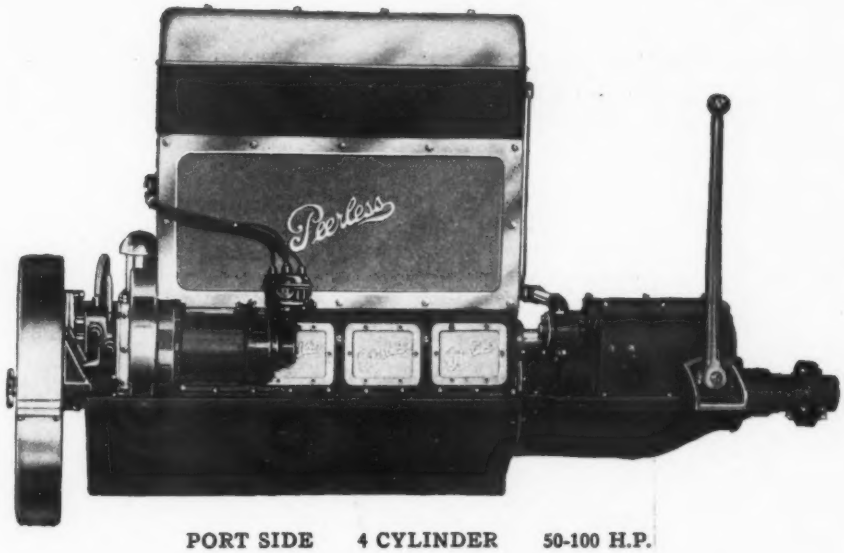
After many years of experience in the manufacture of both "L" head and "Valve in the head type" we have decided to confine all of our efforts in the production of a new Peerless engine of the Valve in the Head type. These new motors are built in both four and six cylinder models in medium duty and semi-high speed types. The new Peerless is the ultimate in marine engine design. Simplicity and accessibility are apparent throughout the entire motor. In addition to the fact that these motors are simple and accessible they are also very compact and can be installed in a minimum amount of space. By careful judgment we have kept the weight of these motors very low; however, we have not sacrificed weight where it is really needed and have a large factor of safety in every working part throughout the motor. We have also been extremely careful in selecting the very best material obtainable for each respective part. The quality of materials and workmanship on the new Peerless line is the very best that the market affords.

CONSERVATIVE POWER RATING

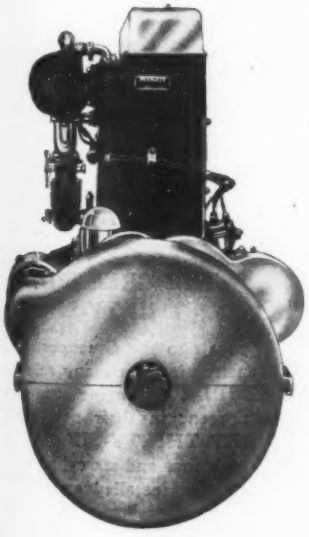
The new Peerless line of motors have ample piston displacement to develop their full rated horse power at engine speeds which are practical and efficient in the ordinary type of boat. If the prospective customer will make an honest comparison considering bore and stroke and horse power developed, it will be apparent that we are offering the new Peerless at the lowest price per horse power plus sturdy construction, modern design and thoroughly reliable and economical motor service.

Advertising Index will be found on page 284

Peerless



PORT SIDE 4 CYLINDER 50-100 H.P.



4 cyl., 50-100 H.P. Bore 5", Stroke 7" Price $1500

Weight, Iron Base, 1200 lbs. Weight, Aluminum Base, 1000 lbs.

4 cyl., semi-high speed type, 115 H.P. at 1450 R.P.M., Price $16.00

Outstanding Features of the New Peerless Valve in the Head

The cylinders are cast en bloc, combustion chambers completely machined. The cylinder head is removable and is fitted with a copper asbestos gasket having a sufficient number of studs to insure against possible chance of leakage. It is thoroughly water jacketed including the valve seats. The head is so designed that the incoming and outgoing gases have free passage. The entire valve mechanism is enclosed with an oil tight cover which can be easily removed. The rocker arms are of forged steel and bronze bushed. They are carried on a hardened rocker arm shaft extending the entire length of the motor. This is drilled for pressure lubrication. Each rocker arm is also drilled, thus carrying the oil to the ball and socket joint on top of the push rod. The valve clearance adjustment is on top of the rocker arm, making it accessible. Thompson silchrome valves are used. The valve guides are fitted with removable bushings. Double helical or herring bone gears are used. The crankshaft gear is of steel, camshaft gear of bronze, and the generator drive gear of steel. These three gears are all that are used in the entire motor. Their operation is absolutely silent. The intake manifold is equipped with a heat jacket directly above the carburetor where it is most efficient. With this new type of manifold the motor can be operated at the lowest throttling speeds for an indefinite period. Acceleration is perfect.

PEERLESS MARINE MOTOR CORP.

2150 NIAGARA ST. BUFFALO, N. Y., U. S. A.

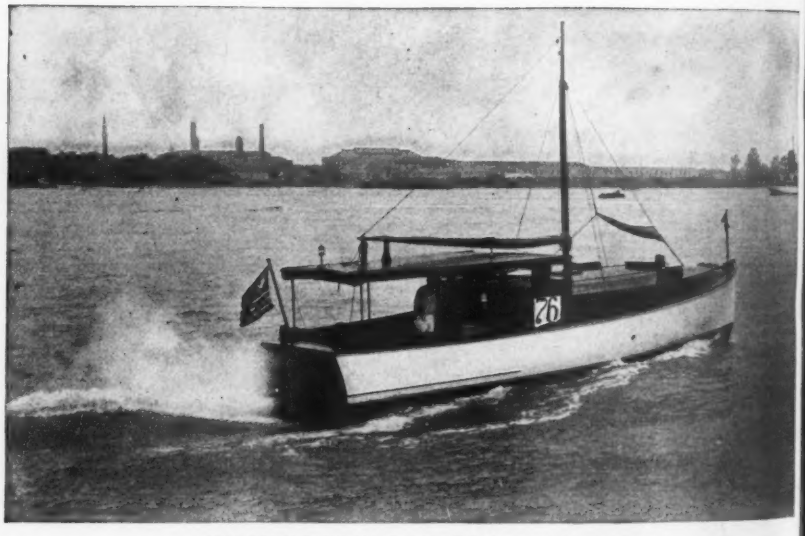
Peerless

PEERLESS engines are fast becoming popular with the leading manufacturers of standardized boats of the better class.

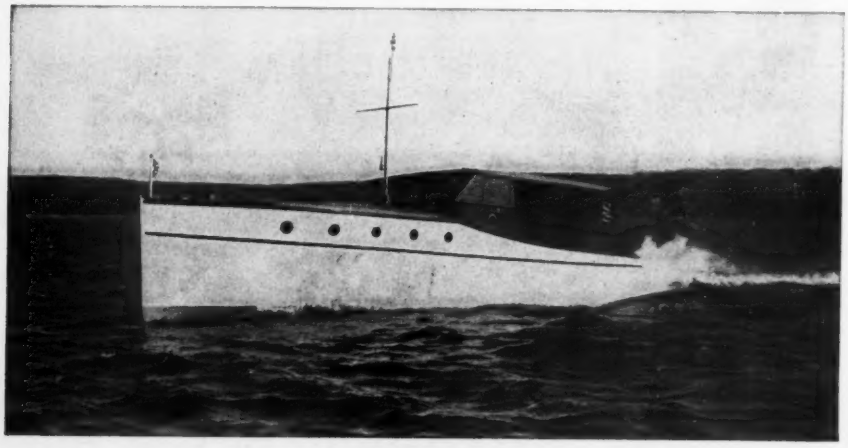
THE MATTHEWS "38"

PEERLESS engines are standard equipment in the popular MATTHEWS "38." At the present time a good proportion of the Matthews production is PEERLESS equipped.

The new six cylinder 75-150 H.P. drives the Matthews "38" at a speed of 18-20 miles per hour. The four cylinder 50-100 H.P. gives this boat a speed of 16 miles. These new valve in the head motors have been installed in the Matthews "38" and tested in actual service.



A MATTHEWS "38" PEERLESS EQUIPPED



THE GREENPORT

THE GREENPORT THIRTY-SIX

A year ago the Greenport Basin & Construction Company selected the PEERLESS engine as standard equipment in their new GREENPORT THIRTY-SIX. A number of both four and six cylinder models have been installed and they have proven very satisfactory. The PEERLESS was selected owing to the fact that they have ample bore and stroke to turn a propeller wheel with enough blade area to drive these boats efficiently. The four cylinder model drives this boat at 15 miles per hour, while the six cylinder model gives this boat a speed of 18 miles per hour.

Advertising Index will be found on page 384

RAJAH SPARK PLUGS

IN motor boating so much depends upon the reliability of the spark plugs that you cannot afford to have your engine equipped with any but the best. Why gamble with ignition uncertainty? Use Rajah Spark Plugs—the only plug on the market designed originally and principally for marine service.

You do not have to change Rajah Plugs as frequently as you do other plugs. No other plug can stand up under the heavy fuel charge of the marine engine with equal dependability. The leading marine engine manufacturers recognize this and use Rajah Spark Plugs as standard factory equipment.

For exposed engines in open boats and on outboard motors use the Rajah Waterproof type plug. The plug with the rubber nipple protecting the terminal, and the condensite cap protecting the porcelain. It's waterproof, shockproof and breakproof.

Standard Rajah Plug	**$1.00**
Giant Rajah Plug	**1.25**
Waterproof Rajah Plug	**1.25**

Equip your wires with Rajah terminals, the universally accepted perfect electrical connection, easiest to connect or disconnect. Fit all makes of plugs.

Rajah Standard Terminal	**$ .10**
Rajah Solderless Terminal	**.15**

All up-to-date dealers carry Rajah Spark Plugs and Rajah terminals. If you prefer, order direct from us giving make of motor. Prompt delivery assured.

RAJAH AUTO SUPPLY CO., BLOOMFIELD, N. J., U. S. A.

Marine Distributors of Rajah Spark Plugs and Terminal

Geo. M. Auten & Co., New York
E. J. Willis Co., New York
R. W. Zundel Co., New York

Chandler & Farquhar, Boston
Rapp-Huckins Co., Boston
Geo. B. Carpenter & Co., Chicago
Henry H. Smith & Co., Detroit

Marine Equipment & Supply Co., Phila.
Gas Engine & Boat Corp., Norfolk, Va.
D. M. Jones, Elizabeth City, N. C.

Following in the Footsteps of His Forefathers

With Woolsey's Marine Paints

Look for this Trade Mark

it's Your Protection

The users of Woolsey's Copper Paint become acquainted with its virtues early in life. Like tradition it is passed on from one generation to another.

James P. Clark, Jr., of Niantic, Conn., is here pictured following in the footsteps of his father, grandfather and great grandfather who have always been enthusiastic users of Woolsey's Marine Products.

When in the market for Quality Marine Paints and Varnishes purchase the Woolsey Line, the one known to generations that have preceded and the one that increases in popularity with each succeeding generation.

C. A. WOOLSEY PAINT & COLOR CO.

Office and Factory: JERSEY CITY, N. J.

Quality Products Since 1853

Warehouses: San Francisco, Cal., Houston, Tex.
Stocks carried in every port in the world.

Visit us at Booth 17 at the Motor Boat Show

Write today for Marine Paint Booklet and pamphlet entitled "HOW TO PAINT A BOAT" Free.

Advertising Index will be found on page 384

TOPPAN BUILT *for* Speed *and* Service

"Sea Crest"

Standard Toppan 30 ft. Express Cruiser powered with 6 cyl. Kermath and 4 cyl. Peerless 100 H.P. marine engines. Speed, 23 to 25 miles.

AMONG the many successful Toppan Boats delivered in 1925 may be mentioned "Chinook," "Miss Mildred," "Sea Crest" and "Pep," all standard 30 ft. Sea Crest models powered with either Kermath or Peerless Marine Motors.

Toppan Power Dories built in 1925 may be found in many foreign countries as well as at home.

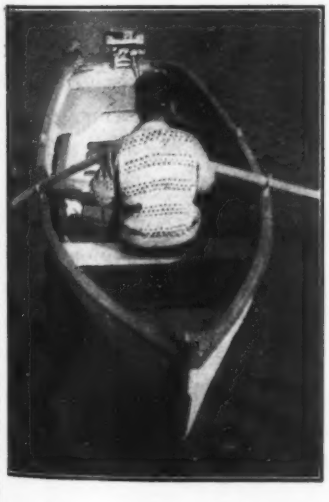
Twelve and Fifteen Foot Toppan outboard motor boats were supplied to hundreds of satisfied customers last year.

Toppan "Sea Dogs" as usual were supplied to those customers who appreciate a dry, seaworthy runabout powered with a real marine motor with plenty of piston displacement.

Toppan 10 and 12 ft.

YACHT TENDERS

were very popular, as they were designed to tow perfectly at any speed while maintaining real seagoing ability.



Toppan Outboard Motorboat

A new 12 and 15 ft. model sold with the Elto motor at a special price.

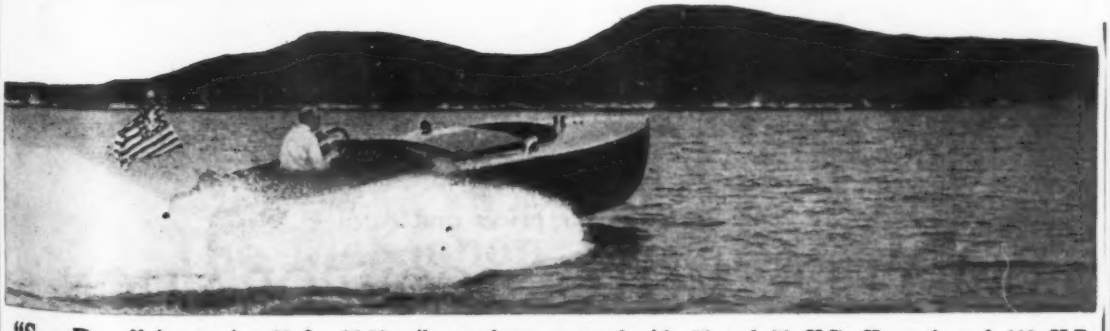
Toppan Power Dory Launch

A popular 22 ft. comfortable, seaworthy boat for those who do not desire high speed. 8 to 16 H.P. Kermath engine protected under hatch aft.

TOPPAN BOAT *and* ENGINE CO.

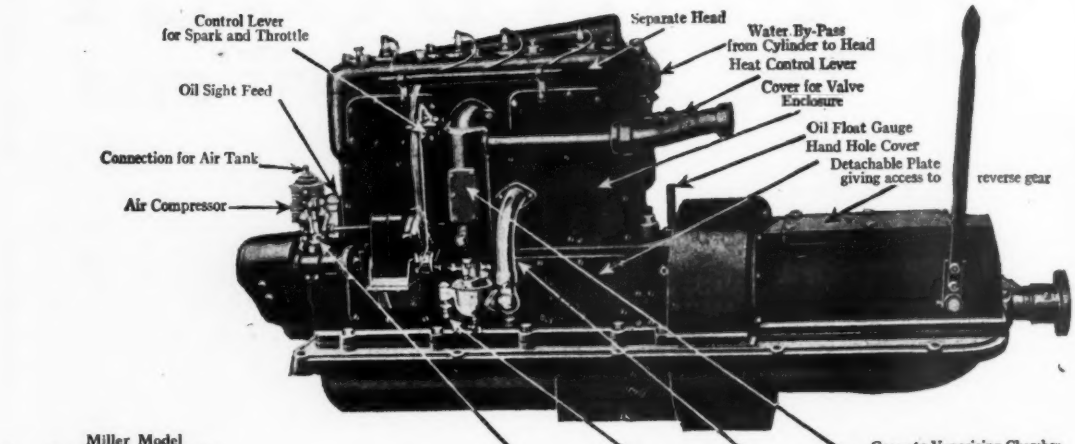
MEDFORD, MASS.

Complete Specifications and Circulars on request, and deliveries from stock at this season.

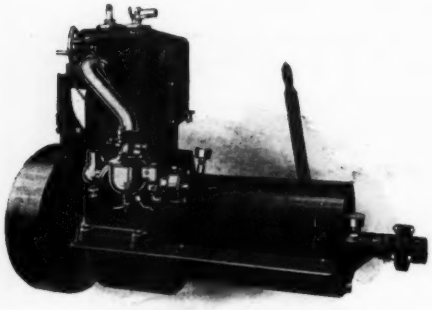


"Sea Dog" A seagoing 22 ft., 25-30 mile runabout, powered with 55 and 70 H.P. Kermath and 100 H.P. Peerless engines.

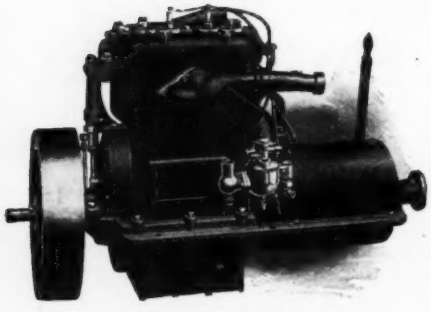
Miller Motors Talk Quality


Control Lever for Spark and Throttle
Separate Head
Water By-Pass from Cylinder to Head
Heat Control Lever
Cover for Valve Enclosure
Oil Sight Feed
Oil Float Gauge
Hand Hole Cover
Connection for Air Tank
Detachable Plate giving access to reverse gear
Air Compressor
Cover to Vaporizing Chamber for removal of carbon
Governor for Speed Control
Three Way Cock for Gasoline and Kerosene
Suction Pipe absorbing foul air from Engine Room

Miller Model
F-4, I-4, R-4 and S-4
Medium and Heavy Duty
4 Cylinders
Medium Duty
F-4, 18-24 H.P., I-4, 24-30 H.P.
Heavy Duty
R-4, 28-35 H.P., S-4, 40-50 H.P.



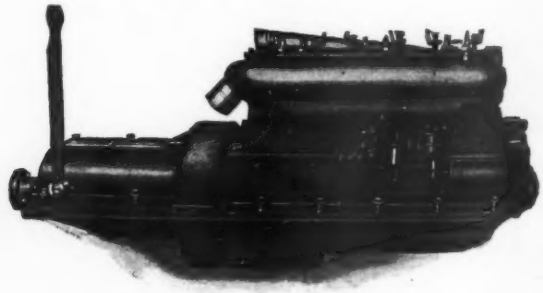
Miller Model F-1 and I-1
Medium Duty, 4 Cycle
4 and 6 H.P.



Miller Model F-2 and I-2
Medium Duty, 2 Cylinders
10 and 14 H.P.

IN the twenty years that Miller Marine motors have been on the market they have gained for themselves a reputation of true reliability and dependability. Miller Motors appeal to the boatman who puts quality and sound engineering principles above price; yet they are not what you would call an over-priced motor. They are priced within the reach of the average buyer. The simplicity of their construction, and the ready accessibility to all moving parts are unrivaled.

The many Miller models, ranging from 4 H.P. to 50 H.P., provide a suitable power plant for every type of boat from a small runabout to sturdy work boats and cruisers up to 60 feet in length.



Miller Model E-6
25-35 H.P. at 600 to 1200 R.P.M.

Write today for prices and catalog

MILLERS MOTOR CORPORATION

2333 N. Talman Street, Chicago, Ill.

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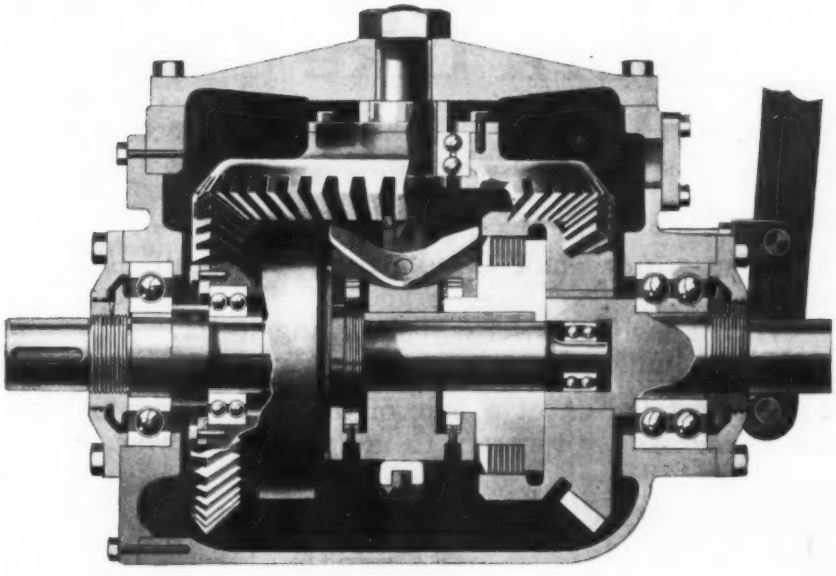
"..... as near perfection as any piece of machinery I have ever seen..." *says Professor J. C. Wattleworth of the Case School of Applied Science.*

McKinnon Reverse Gear



Prof. J. C. Wattleworth, of the Case School of Applied Science, Cleveland, Ohio, tested the McKinnon Gear for efficiency. His report stated in part:

"YOUR GEAR IS AS NEAR PERFECTION AS ANY PIECE OF MACHINERY I HAVE EVER SEEN, BECAUSE OF THE FACT THAT WHEN IT IS IN GO-AHEAD THE BACKING UP MECHANISM IN NO WAY RETARDS THE EFFICIENCY, AND WHEN IT IS IN REVERSE IT IS NOT RETARDED BY THE GO-AHEAD MECHANISM, ALSO THE PARTS ARE SO STURDY THAT THERE IS NO PART BUT WHAT SHOULD RUN A LIFE TIME."

THE McKinnon Gear is radically different from the design of the prevailing types of reverse gears. It will run for hours in reverse at full engine speed without heating or harm. Furthermore, it delivers 97% efficiency of the engine to the propeller. Do you know of any other gear that can duplicate such performance? Most other gears would burn up after running for an hour in reverse under full load.

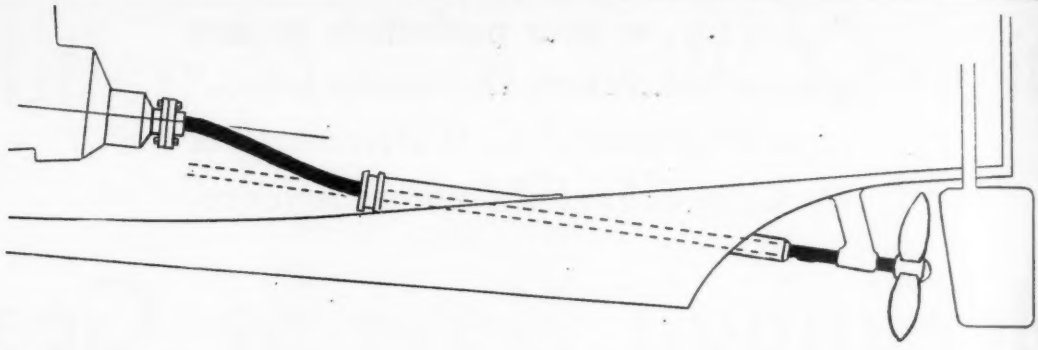
The McKinnon Gear is the simplest in design—it is the strongest and most durable on the market. It hasn't got the multiplicity of parts that mark the design of the planetary type of gear. There are no small working parts to wear out. The principal parts are three perfectly meshed bevel gears with large teeth and a multiple disc clutch, having far more friction surface for its size than any other type of clutch. It engages smoothly and holds firmly. All rotating parts are mounted on S. K. F. ball bearings and are submerged in a shower of oil.

The McKinnon Gear is built to stand hard use and abuse with powerful engines and heavy boats, without trouble, repairs or adjustment.

Write today for description and prices, giving details of your engine, including R.P.M.

The McKinnon Iron Works Co.

ASHTABULA OHIO



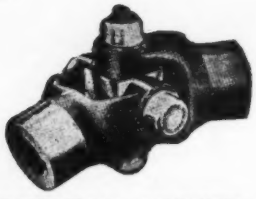
Don't Make Your Engine Work Like This

Of course the misalignment up there is exaggerated but the condition shown is slowing down thousands of boats—maybe yours?

Such misalignment is almost bound to take place:

(a) When a new hull is launched—the hull is supported differently.
(b) When a new hull swells on absorbing water.
(c) When a hull encounters rough water.

The mere installation of a pair of universal joints like the one shown below has been known to increase the power available at the propeller 17%.



SELECT YOUR UNIVERSAL JOINTS FROM THIS TABLE

If Angle of Operation is more than 10°, consult us.

SIZE OF JOINT	MAX. SHAFT DIA. POSSIBLE	H.P. CAPACITY AT 1000 R.P.M.	LENGTH SINGLE JOINT	DIA. OF CIRCLE FOR SWING	APPROX. WEIGHT
B-1	1¼"	13	7½"	4⅝"	7 lbs.
B-2	1½"	26	7½"	5¾"	11 lbs.
B-3	1⅞"	34	8½"	6¼"	18 lbs.
B-4	1⅞"	41	8½"	6 13/16"	20 lbs.
B-5	2⅛"	62	10½"	7 3/16"	30 lbs.
B-5	2⅝"	62	13¼"	7 3/16"	35 lbs.

Blood Brothers Machine Co.

Pioneer Makers of Universal Joints

ALLEGAN MICHIGAN

If your marine supply dealer or boat builder does not carry Blood Universal Joints in stock, write us for prices and name of nearest dealer

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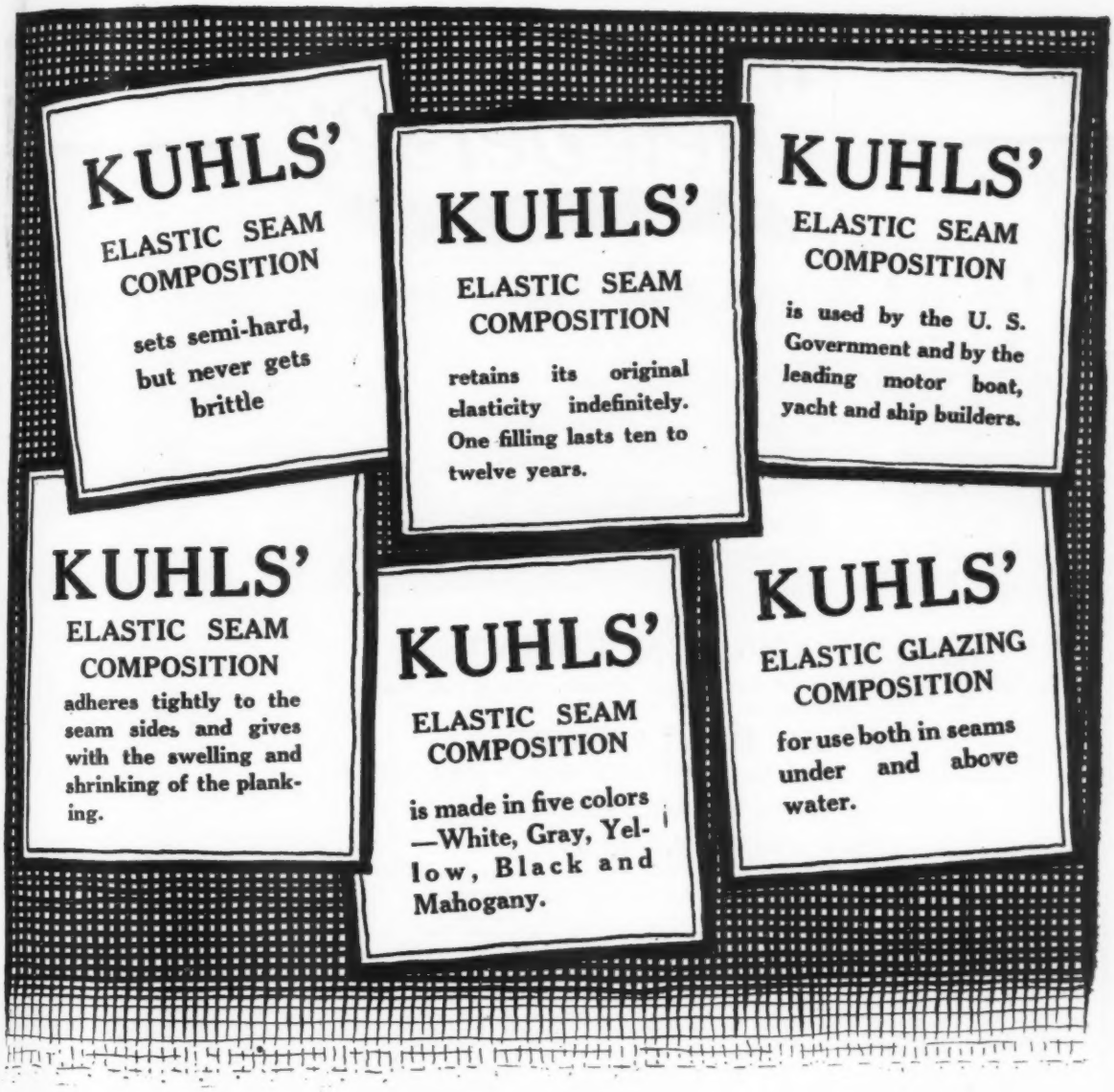

KUHLS'
ELASTIC SEAM COMPOSITION
sets semi-hard, but never gets brittle
KUHLS'
ELASTIC SEAM COMPOSITION
retains its original elasticity indefinitely. One filling lasts ten to twelve years.
KUHLS'
ELASTIC SEAM COMPOSITION
is used by the U. S. Government and by the leading motor boat, yacht and ship builders.
KUHLS'
ELASTIC SEAM COMPOSITION
adheres tightly to the seam sides and gives with the swelling and shrinking of the planking.
KUHLS'
ELASTIC SEAM COMPOSITION
is made in five colors —White, Gray, Yellow, Black and Mahogany.
KUHLS'
ELASTIC GLAZING COMPOSITION
for use both in seams under and above water.

37th Year

WHY use seam fillers of unknown quality when you can buy one of known and proven quality? Kuhls' Elastic Seam Composition has all the qualities that make a seam filler reliable, durable, elastic and non-brittle. Use Kuhl's Seam Composition now for filling the deck and plank seams and you won't have to fill the seams again for ten years or more. You have five colors to select from, there's a color to harmonize with your boat—White, Gray, Yellow, Black and Mahogany. Kuhls' is carried in stock by marine supply dealers, ship chandlers and hardware dealers everywhere. If your dealer cannot supply you write to us.

Other Kuhls' Marine Specialties

Elastic Flat Yacht White
Elastic Gloss Yacht White
Elastic Deck Varnish
Elastic Trowel Cement

Write today for literature and prices

H. B. FRED KUHLS

Sole Manufacturers *Established 1889*

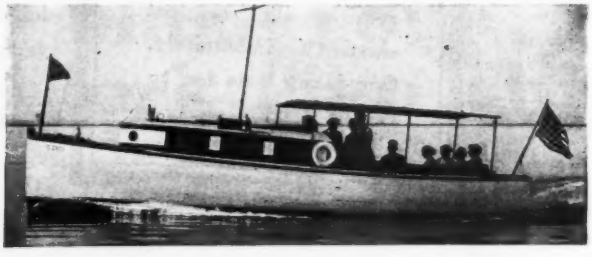
SIXTY-FIFTH STREET and THIRD AVENUE, BROOKLYN, N. Y.

"New Jersey"

Top and Bottom Paint for Everything that Floats

YACHT WHITE

For use above the water line. Can be washed or scrubbed and remains white.



COPPER PAINT

For use below the water line. Kills worms and vegetable growth, barnacles, etc.

SHOW ANNOUNCEMENT

We extend a cordial invitation to our friends to visit our Booth No. 34 — Mezzanine Floor — at the Annual

MOTOR BOAT SHOW

JANUARY 22nd to JANUARY 30th, 1926

AT GRAND CENTRAL PALACE, NEW YORK CITY

This is what Boat Builders say

RED BANK YACHT WORKS

BUILDERS OF COMMERCIAL AND PLEASURE CRAFT

Shrewsbury River,
Red Bank, N. J.

December 17, 1924

New Jersey Paint Works,
Jersey City, N. J.

Gentlemen:

This acknowledges receipt of yours of the 16th inst., and we are pleased to state that we have been using New Jersey marine and copper paints exclusively for the past four years and we have found this material to be very satisfactory and our best comments are that we are still using this material and no other for our products.

We would be glad, indeed, to give any information as to the merits of New Jersey products.

Very truly yours,

RED BANK YACHT WORKS

THE ELCO WORKS

Bayonne, N. J.
Ave. A and North St.
January 11, 1924

New Jersey Paint Works,
Wayne and Fremont Streets,
Jersey City, New Jersey

Gentlemen:

In regard to the use of your New Jersey Copper Paints, we wish to say that we have been using these for the past fifteen years. Previous to that time, we had tried three or four different makes, some of which caused us considerable difficulty, inasmuch as they did not prevent the growth of barnacles and were not satisfactory in application.

We have found your Copper Paint to be uniform in quality, and we do not remember ever having a complaint from any of our customers as to the durability and effectiveness of your paint.

We would, also, like to express our great satisfaction with the service which you have given us in prompt delivery and attention to our orders.

Yours very truly,
THE ELCO WORKS

SMITH & WILLIAMS CO.

BUILDERS AND REPAIRERS OF PLEASURE AND COMMERCIAL WATER CRAFT

Salisbury, Md.
December 31st, 1924

New Jersey Paint Works,
Jersey City, N. J.

Gentlemen:

Being that the old year, 1924, is about to close we could hardly let the New Year enter without telling you that we have enjoyed a very good year on the sale of "New Jersey" paints, especially Yacht White and Yacht Red Copper as well as Sargasso Green Non-fouling Composition. All of these products have proven to be very satisfactory for their respective use. Practically every yacht we have built this year has been finished with your products and in several cases the Owners have expressed themselves as being highly pleased with the results obtained. We have also talked with a number of the Captains and they say instead of putting on a new coat of paint when the old gets dirty all they have to do is to get a bucket of water, some soap powder and a good scrub brush and in a short time they have it looking like a new paint job. Being able to do this, of course, saves the Owner quite a bit of money during the season.

As you already know, our sales on these products have been increasing yearly and from present prospects we have every reason to believe that 1925 is going to show a still larger increase.

With best wishes for a Prosperous New Year, we beg to remain,

Very truly yours,
SMITH & WILLIAMS CO.

Write for the booklet DAVY JONES LOCKER giving valuable information on painting, sent without cost to you

New Jersey Paint Works

HARRY LOUDERBOUGH, Inc.

Wayne and Fremont Streets **JERSEY CITY, N. J., U. S. A.**

PAINT AND VARNISH MAKERS SINCE 1889

Advertising Index will be found on page 344

Designed and built by Luders for Col. Samuel M. Nicholson of Providence, R. I., the 100 ft. Express Cruiser Sea Dream characterizes the latest refinements in yacht styles and comforts.

The name Luders is always linked with fine yachts of practical and sane construction combined with accuracy of workmanship. Our aim is to serve the yachtsman who appreciates the difference in quality between boats that are built to sell and those which are designed and built to meet his particular requirements.

NICHOLSON FILE COMPANY.

PROVIDENCE, R. I., U.S.A.

SAMUEL M. NICHOLSON, President and General Manager

PAUL C. NICHOLSON, Vice President and Treasurer — ERNEST B. CRAIG, Secretary and Assistant Treasurer
HENRY W. HARMAN, Assistant Treasurer and Sales Mgr. — AUGUSTUS E. SAUNDERS, Assistant Secretary and Manager of Chicago Office
ALBERT J. DANA, Assistant Treasurer — ROBERT W. HATHAWAY, Assistant to President
WALLACE L. POND, Domestic Sales Manager — S. FOSTER HUNT, Foreign Sales Manager

November 3, 1925.

A. E. Luders, President,
Luders Marine Construction Co.,
Stamford, Conn.

Dear Mr. Luders:-

I wish to take this opportunity of advising you that the yacht "SEA DREAM" which you built for me and which was put in commission early in July this year, has been satisfactory in every particular.

She has withstood some rough seas and has proven herself under some trying conditions an able sea boat; and as the captain expressed it on one of our roughest trips proved herself seaworthy and was as dry as a bone."

I wish to say to you that she has been very much admired by many yacht owners, and I am very well pleased with her.

With all best wishes, believe me

Sincerely yours,

Samuel M. Nicholson

LUDERS MARINE CONSTRUCTION CO.

STAMFORD, CONNECTICUT

Designed and Built by

LUDERS

THE LAST WORD IN YACHT DESIGNING & BUILDING

ZUNDEL

MARINE SUPPLIES

Waterproof Marine Horns

Oberdorfer Gear Pumps All Sizes ⅛" to 1½"

SPECIAL SALE
BOAT CLOSETS

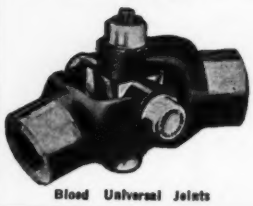
Genuine J. L. Mott manufacture. All metal parts of brass. Vitreous china bowl, non-absorbent. Mahogany finish seat and cover. Width 7½ in. Top of Bowl, 11 in. Back to Front, 17 in. Height, 13½ in. Top of seat, 13 in. Special price

$32.00 until March 1st.

Send 25 cents for our complete illustrated catalog listing every accessory for the boat. This amount will be credited on your next order.

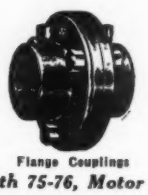
R. W. ZUNDEL, Inc., 1 Block from South Ferry
47 Whitehall St.—2 Front St.—New York, N. Y.

Steering Wheels



Blood Universal Joints

Compasses



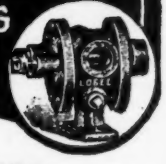
Flange Couplings

Portlights

All these items may be seen at Booth 75-76, Motor Boat Show

LOBEE

CIRCULATING and BILGE PUMPS



THE PIONEERS

Are Not Excelled by Any Pumps Made

For over 25 years have demonstrated their efficiency, reliability and durability by thousands of satisfied owners all over the World.

Lobee Pumps give a positive automatic forced circulation of water or oil in proportion to speed of motor, are noiseless and trouble proof.

The Fastest Racing Boats and largest pleasure boats in the World are Lobee equipped.

If you want the very best—install a Lobee.

For sale and carried in stock by all leading dealers. Write for Booklet M.

LOBEE PUMP & MACHINERY CO.

Dearborn and Bridge Streets Buffalo, N. Y.

LARGE STOCKS OF—

Machine Bolts	Washers
Carriage Bolts	Lag Screws
Cap Screws	Wing Nuts
Hex Nuts	Stove Bolts
Cap Nuts	Knurled Nuts

THE EVERITT COMPANY
271 FRANKLIN ST., BOSTON, MASS.

ONLY BRASS - BRONZE AND COPPER USED - NO IRON

Send for Complete Catalogue

TANKS

FOR STORAGE OF

GASOLINE, OIL or WATER

MADE TO ORDER

OF ANY SIZE OR SHAPE REQUIRED RIVETED OR WELDED SEAMS

Rudders, Stacks, Special Work

L. O. KOVEN & BROTHER, INC.

154 OGDEN AVE., JERSEY CITY, N. J.

Advertising Index will be found on page 384

A YEAR'S ACHIEVEMENT along diverse lines

EFFICIENT UTILITY— despite the stress of storms which sent large liners limping to port, is the marvelous record of the 75-ft. coast patrol boats (familiarly called "rum-chasers"), illustrated above. The first half of 1925 saw the completion of twenty-five of these by us. The part which we played in their designing and the reasons why the Mathis yard was awarded more of these boats than any other builder, mean much to any man about to place a contract.

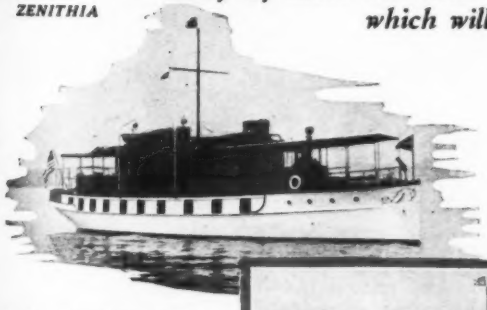
Luxuriously appointed deckhouse, finished in teak inside and out, on the 104-ft. Houseboat, SEQUOIA II, Mathis-built for Mr. Richard M. Cadwalader, Jr., Philadelphia.

LUXURIOUS COMFORT without sacrifice of utility, seaworthiness and economy of operation are the dstinguishing characteristics of the

Mathis-Built Houseboats

—many of them with the new-type Mathis Yacht-stern— which will be seen in Florida this winter.

ZENITHIA



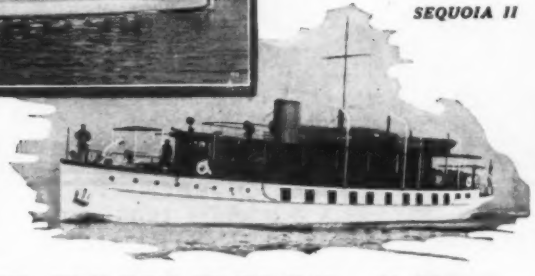
98-ft. Houseboat, ALSCOTIA, completed by us in the first half of 1925 for Mrs. Stricker Coles, of Bryn Mawr, Pa. Since its first appearance at the New London Boat Races it has been the center of favorable comment wherever it appeared.

100-ft. Houseboat, SAMURI, recently completed by us for Major W. Earl Dodge, New York. Designed by Messrs. Tams & King. Includes every feature of comfort afloat which ingenuity has devised to date.

85-ft. Houseboat ZENITHIA built for Mr. A. J. Fay, Lowell, Mass. A sister ship of the original SEQUOIA, built by us for Mr. Richard M. Cadwalader, Jr., Philadelphia, and chartered for this Florida season by Mr. Bartram, of New York.

104-ft. Houseboat, SEQUOIA II, Mr. Cadwalader's new Mathis-built houseboat. Excels in trim, yachty lines, sea-going qualities and speed of 15 miles.

SEQUOIA II



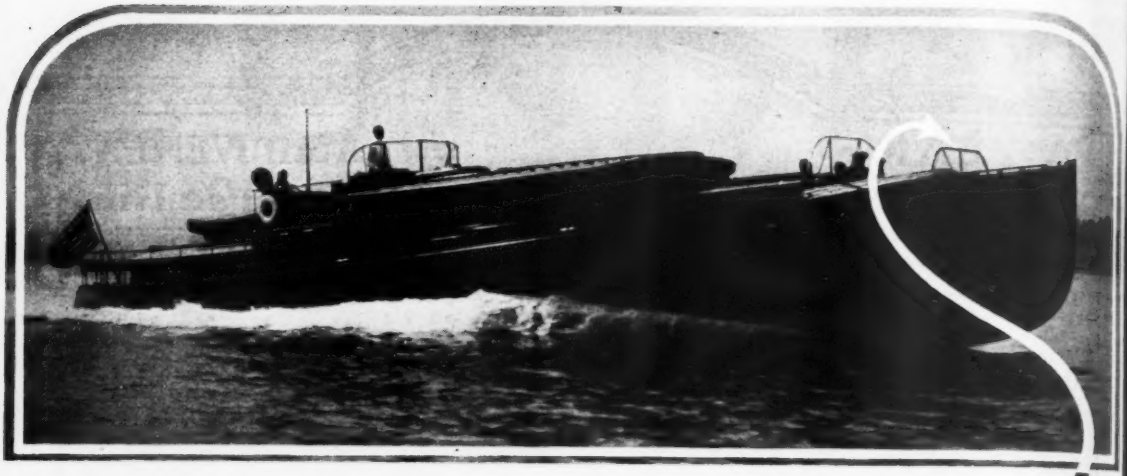
ALSCOTIA

92-ft. TROUBADOUR, Mathis-built for Mr. Webb Jay, of Miami, Florida, and 92-ft. THALIA, for Mr. Thomas M. Howell, Chicago, completed in December, are two new houseboats rivalling yachts in speed, appearance and seaworthiness; yet possessing a degree of comfort to which no yacht of less than 115 feet can aspire.

MATHIS YACHT BUILDING CO.

Specialists in Houseboats and Cruisers from 40 to 120 feet

1926 COOPER'S POINT CAMDEN, N. J.

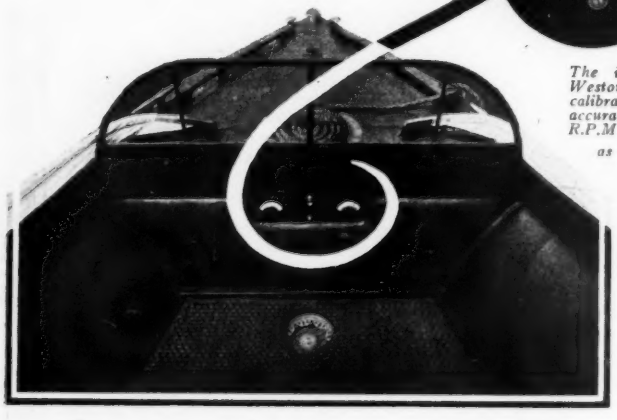


DEPENDABLE and ACCURATE—

ENGINE speed measurements and express cruisers, racing boats and other high powered craft can be made with assurance with the Weston Speed Indicator.
Weston Electric Tachometer is calibrated to detect the slightest falling off or increase of R.P.M. It is guaranteed to be accurate within 1% at all times, when properly installed. The Weston Tachometer consists of two units—a magneto (driven from the moving part by gear, belt or pulley) which generates a voltage directly proportioned to its driven speed, and a voltmeter calibrated in Revolutions per Minute or any other desired units.

The magneto unit of the Weston Tachometer is driven by means of a ... belt or gear connected to the shaft.

The indicator of the Weston Tachometer is calibrated to give an accurate reading in R.P.M. or other units as desired.



A distinct advantage of the Weston Tachometer is the indicator may be installed any distance from the power plant; whereas with other styles of tachometers the indicator cannot be further away than one or two cable lengths from the power plant. Moreover, one or more Weston indicators working from a single Tachometer can be placed in any part of the boat. This is a desirable feature on yachts where indicators are wanted on the bridge, in the engine room and elsewhere. The illustration on the left is typical of the installation of Weston Tachometer Indicators in a remote position. It shows the forward cockpit of the twin screw express cruiser pictured above.

WESTON ELECTRICAL INSTRUMENT CO., 28 Weston Avenue, NEWARK, N. J.

STANDARD THE WORLD OVER

WESTON

Pioneers since 1888

Advertising Index will be found on page 384

The British Navy Has 46 Installations of the McNab Maneuvering Rudder

One of the many British Admiralty Motor Launches equipped with McNab Maneuvering Rudder. This particular craft is the service boat of the British Battleship H. M. S. Queen Elizabeth.

SHOWING RUDDERS IN PERSPECTIVE

THE satisfactory performance of the McNab Maneuvering Rudder is evident, or the British Admiralty would not have made 46 installations of this remarkable Rudder to date. It is also installed on auxiliary craft of the following Governments: United States, Canadian, French, Holland, Norwegian, Swedish, Japanese, etc.

In crowded waters the McNab Rudder's greater efficiency and flexibility in speed control give a decided advantage over that of any other known maneuvering agent. The superiority of the McNab Rudder, its accuracy, rapidity of action and reliability must be fully demonstrated or scores of Governments would never have adopted it. No motor boat should be without it. Reverse gear and reversing of engines is unnecessary on McNab Rudder equipped boats.

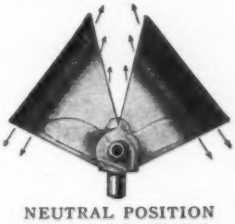
No boat is too small—no ship is too large for the McNab Maneuvering Rudder.

Write today for illustrated literature. State size of propeller, diameter and B. H. P. of your engine. Owners of Outboard motors need only give make of motor when writing.

McNAB KITCHEN RUDDER CORP.

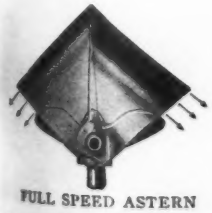
CONNECTICUT AVENUE, BRIDGEPORT, CONN. U. S. A.

FULL SPEED AHEAD

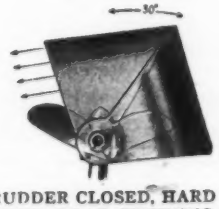


NEUTRAL POSITION BOAT STATIONARY

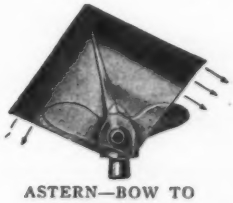
HALF SPEED AHEAD



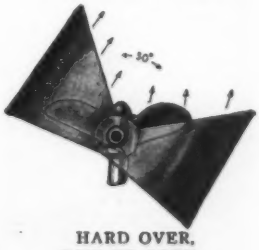
FULL SPEED ASTERN



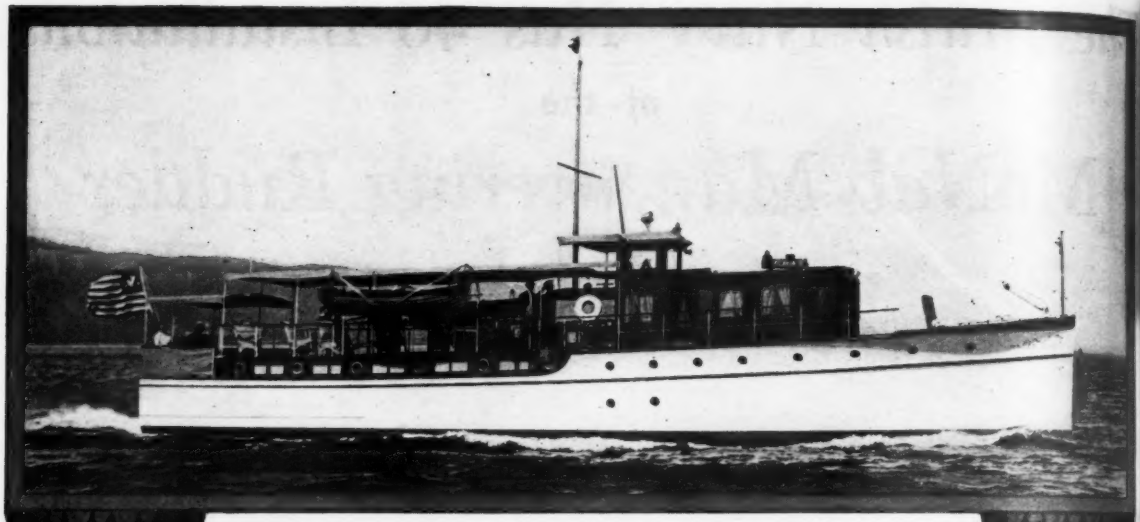
RUDDER CLOSED, HARD OVER, BOAT SPINNING ON OWN CENTER



ASTERN—BOW TO STARBOARD



HARD OVER, BOW TO PORT



Flavia II, a 75' x 15' yacht designed and built by us for Mr. Joseph F. Joseph of Stonington, Conn. Powered with a six cylinder 75-100 H.P. 20th Century Marine Motor. Speed 12 miles per hour.

Delightful Homes on the Water

BUILDING just boats and building homes afloat are two different things. A yacht or houseboat should be something more than merely a seaworthy boat. It must contain all the comforts of the home and have the same congenial atmosphere that makes the home attractive.

Craft of our design and construction represent the final word in serviceability and comfort.

We go even a step further than the designing and building of the boat itself. We build the power plant, too, the 20th Century Marine Motor. This motor is the best fitted for yachts and houseboats where heavy duty engines are required.

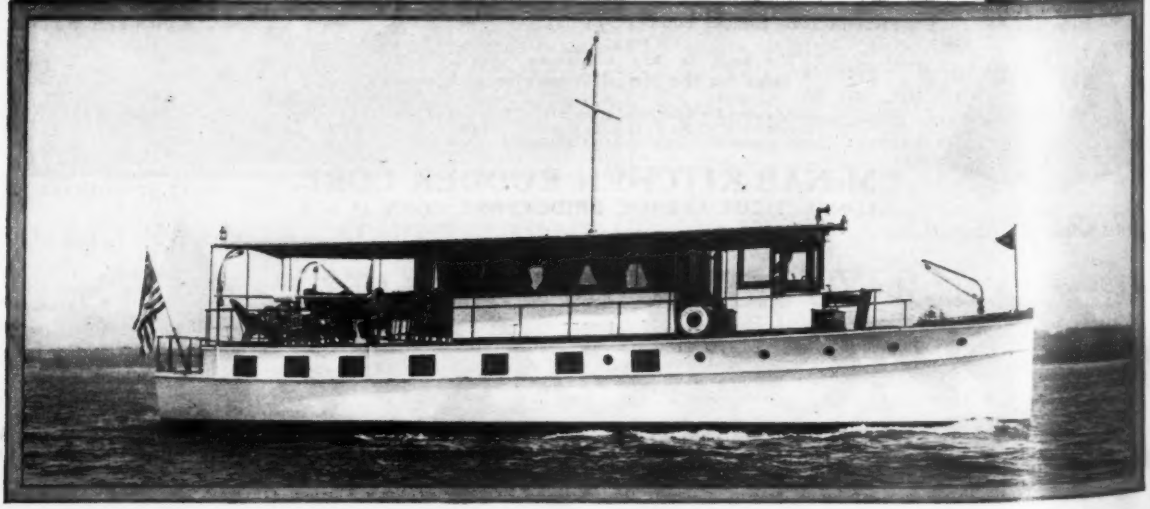
20th Century Motors

4 Cyl. Bore, 6½"; Stroke, 8½". 50- 60 H.P. Heavy Duty Type. 400-500 R.P.M.
6 Cyl. Bore, 6½"; Stroke, 8½". 75-100 H.P. Heavy Duty Type. 500-600 R.P.M.

New York Launch & Engine Co.

Morris Heights **New York City**

Venture, a 60' x 15' houseboat designed and built by us for Mr. G. C. Meyer of New York. Powered with a six cylinder 75-100 H.P. 20th Century Marine Motor. Speed 11 miles.



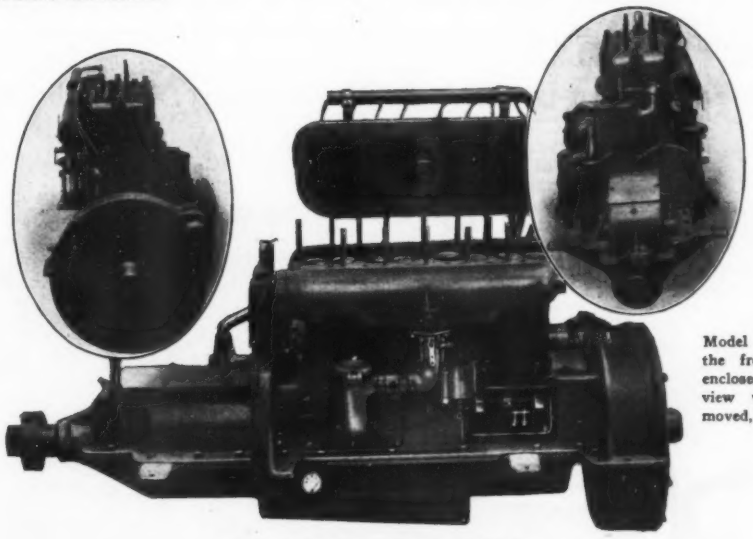
Advertising Index will be found on page 384

BRENNAN
STANDARD
MARINE MOTORS
Give Greater Value

WHETHER your power requirements are for a runabout, cruiser, fishing or workboat you will not find a power plant that gives more value per dollar than the Brennan Standard Marine Motor. For twenty-nine years the Brennan has been classed as being among the few "best" marine engines made. Many owners tell us the Brennan is the best marine engine they ever used. You don't have to be an expert to discover the superior qualities of a Brennan. Your own experience with other power plants contrasted to the motor performance of a Brennan powered boat will disclose the difference to you. A Brennan powered boat is economical to operate, too. You don't have those periodic engine repair bills to dim your boating pleasure.

Brennan Standard Model E-4

This is the latest Brennan four cylinder model. It is of the L head construction and has a 4½" bore and a 5" stroke. This model is built in two power ranges and for both left and right hand rotation. The heavy duty model develops 35 H.P. at 1000 R.P.M., and the high speed type develops 50 H.P. at 1600 R.P.M. It is an all enclosed power plant and is pressure lubricated.



Model E-4, showing the front view with enclosed flywheel, side view with head removed, and rear view.

SIX-CYLINDER MODELS

D-6	4½" Bore,	5" Stroke,	50-75 H.P.
60	4" Bore,	5½" Stroke,	60 H.P.
100	4⅜" Bore,	5½" Stroke,	65-100 H.P.

Built-in reduction gear optional

BRENNAN MOTOR MANUFACTURING COMPANY
500 E. Water Street **Syracuse, New York**

Write BRENNAN Before You Buy

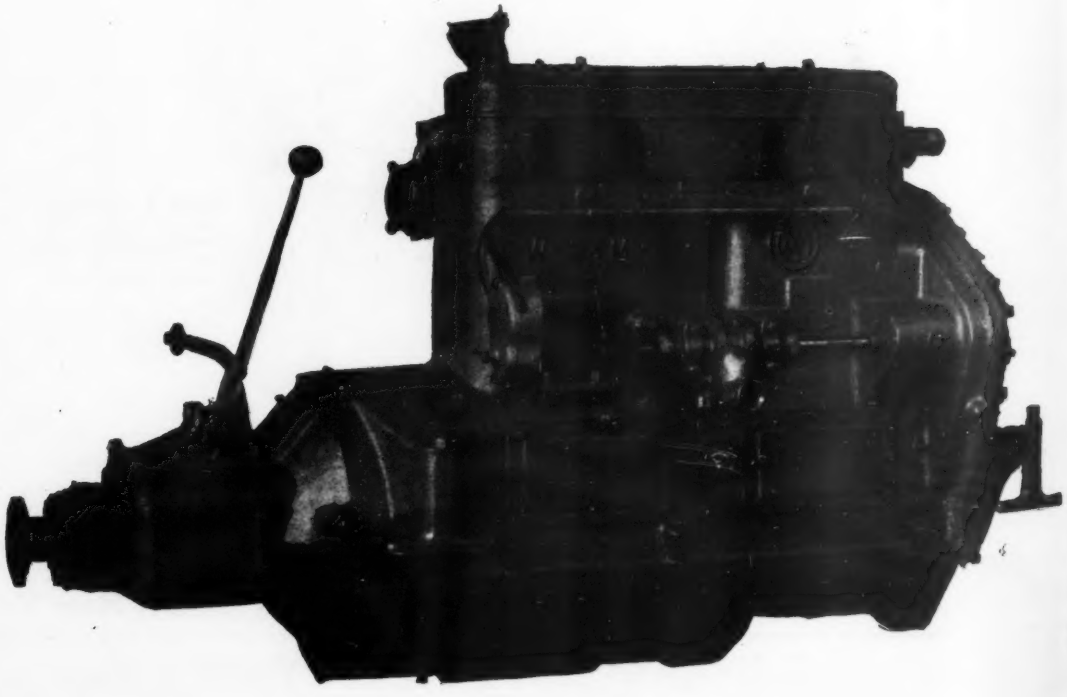
W-S-M
MARINE ENGINES

Announcement

THE Sanderson-Cyclone Drill Company, Orrville, Ohio, have purchased from the Wellman, Seaver, Morgan Company, Cleveland, Ohio, all manufacturing and selling rights, good will, patterns, machinery, tools and jigs for **W-S-M** gasoline engines. After January 1st, 1926, the engines will be manufactured in the Sanderson-Cyclone Drill Company's new and modern factory at Orrville, Ohio.

The same high standards of engineering and engine building that have made these engines so much desired for marine service will be maintained and will be improved whenever and wherever possible.

The Sanderson-Cyclone Drill Company, Orrville, Ohio



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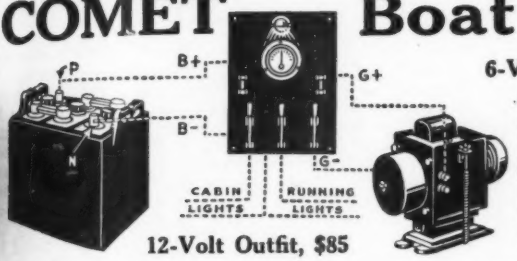
COMET Boat Lighting Outfits



12-Volt Outfit, $85

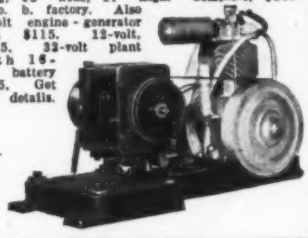
12-Volt $85.—180 candlepower. Same as 6-volt outfit except it is built especially for 12-volt service. Price, complete, $85 f. o. b. Indianapolis. (Generator $49. Switchboard $10. Battery $26.)

6-Volt Outfit, $74

6-Volt Outfit is 90 candlepower. Generator is special marine type, fully enclosed: generates 15 amperes at 8 volts: fitted with governor pulley for flat or round belt, or for friction drive against flywheel. Switchboard is 7 x 9", has ammeter, pilot light, three switches, two fuses. Battery is Prest-O-Lite; capacity 100 ampere hours. Outfit is easy to install. Compact and light—weighs only 104 lbs. Price, $74. f. o. b. Indianapolis. (Generator only, $42. Switchboard $10. Battery $22). Order from this ad, or send for details.

110-Volt; Uses No Battery; $140

An independent lighting plant—needs no storage batteries. Generates 350 watts, 115 volts, D. C. Uses standard 110-volt wiring, fixtures, lamps, etc. Air-cooled engine and marine type generator. Weighs 125 lbs. 27" long, 13" wide, 17" high. Complete, $140 f. o. b. factory. Also 6-volt engine-generator unit $115. 12-volt, $125. 32-volt plant with 16-cell battery $195. Get full details.



Comet Electric Co., 1241 St. Paul St., Indianapolis, Ind. Manufacturers for 26 years.

DURKEE-GUINAN CORPORATION

Booths 32 and 33 (Mezzanine Floor) at the New York
MOTOR BOAT SHOW
Grand Central Palace January 22nd to 30th

Inspect Our Complete Display of

POWER and SAILBOAT EQUIPMENT

29 SOUTH STREET 37-39 OLD SLIP NEW YORK

"Headed for the open Sea, and VINYARD design and build mean staying there in SAFETY."

Our prices are always best when the material we use and our method of construction are considered.

Twenty-seven years' experience and our PERSONAL supervision are available for your boat.

Vinyard Ship Building Co.

Milford, Delaware U. S. A.

KAINER ADJUSTABLE STEERING GEARS

KAINER auto type steerer for boats embodies all of the latest refinements such as the new style "finger type" spark and throttle levers, bakelite horn button and finishing collars. The wheel is of genuine walnut with inserted spider. Wood or metal spider is optional. The drum is driven by heavy tubing inside of the main column and is securely keyed to the steering wheel hub.

The Kainer auto type steerer is adjustable to different angles.

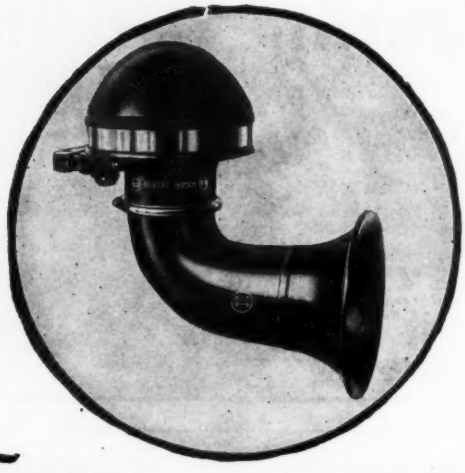
Kainer Running Lights

Heavy cast brass, built to last. Non-rattling glass. Top of Class I and II Bow Lights screws off permitting easy access to bulb and wiring without detaching the light from the deck.

Class I combination Post Light with Red and Green Lenses.

KAINER & COMPANY CHICAGO

761-763 Mather Street



TONE . . . makes this horn the ideal signal for motorboats

MUSICAL, yet positive in its warning—clear, vibrant, penetrating—the tone of the *Original* Bosch Horn is unlike that of any other warning signal.

The *Original* Bosch Horn is of the vibratory type. Its action is lastingly trouble-proof. No motor to wear out or give trouble. It is in every way up to the high standard of *Original* Bosch.

You will find, as other boat owners have found, that the *Original* Bosch Horn is the ideal warning signal for the motorboat. The unusual carrying power combined with pleasantness of its tone is not duplicated in any other horn.

Go to the *Original* Bosch representative in your locality and examine this horn. If you don't know where to find him, write us direct.

Address: Robert Bosch Magneto Company, Inc., 115a West 64th Street, New York. Chicago Branch: 1302 South Wabash Ave.

Note

No finer tribute can be paid the *Original* Bosch Horn than the way it is being imitated. But remember: the *Original* Bosch Horn owes its popularity to the high standard of materials and workmanship which characterise it and all *Original* Bosch products. To get this quality, you must get *Original* Bosch. Look for the name Robert Bosch and this trademark on every *Original* Bosch product. They are your guaranty of *Original* Bosch quality as known the world over since 1887.

PRICES	
"Master"	now $25
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"Junior"	now $16

The Original Bosch

ROBERT · BOSCH · MAGNETO · COMPANY · INC.

No connection whatsoever with the American Bosch Magneto Corporation

Fashioning a Ship's Model

(*Continued from page 57*)

to scale; to braze or to sew; to splice 1/64th-inch rope and to tie a knot in places it is quite impossible to reach.

Before starting at all, the model maker must know the lines of his ship and how to translate them into form; he must understand every last part and the function it performs.

He should know all the deck fittings and their disposition—how to build a windlass, pumps, hatches, fife-rails, deckhouses, skylights, companionways and steering gear, not forgetting that the man-at-the-wheel will need a grating to keep his feet dry.

He must have the dimensions—length and thickness—of his masts and yards; how and where the former step and the latter hang; the size of his tops and cross-trees and where and how they are placed. He must know the purchase required to hoist a certain yard and how it reeves; he must equip that yard with parrel, jackstays, footropes, spiderbands, brace-pennants, topping-lifts, etc. He must know how and where his standing rigging sets up and how to reeve-off and set tight a lanyard with dead-eyes or hearts, each in their rightful place. These few little details being only a few of those to be worked out.

If his ship have sails, the model-builder must be able to cut and rope them, to bend (fasten) them to the yards; to attach the sheets, clewlines and all the running gear, and this is not so simple. Take, for example, a main-buntline on a clipper: this will start under the yard with a clinch, reeve through a lizard on the foot of the sail, up through another in the center of the fore side, then through alead-block on the yard, through another hung to the edge of the top, then down hrough a lead in the rigging to a belaying-pin in the rail. A full rigged ship would have more than a hundred separately named and placed such running lines, without studding-sails.

It might be thought that this exhaustive attention to minute detail and the spending of hours on finical work would be inclined to crab a man—to make him pernickety and crusty—yet the contrary is the fact. Truly, he must have nimble fingers and a capacity for taking pains, but this hobby is more akin to the fountain of youth than any other, and all hobbies are somewhat inclined that way.

The majority of sailors never really grow up; their child-like simplicity is proverbial, and this characteristic seems, to some extent, to be transmitted through the ship model to the collectors and makers of them.

This class of men, in addition to writers, architects and artists, includes some of the keenest business heads of the country—realtors, advertising men, stock brokers, lawyers and presidents of large corporations. It will be found that, though they are shrewd men in business, they all have the one factor in private life of refusing to grow up, and in the midst of a busy day, one has only to murmur "ship model" in their ear to stop the whole works until some knotty point has been thrashed out.

But little has been said about how to proceed to actually make a ship model because that is a subject which, for just one type of vessel, would require a book. The writer has had letters from all over the country inquiring for such information, but has not been able to help his correspondents very much because such a book does not exist.

If the aspirant wants only a decorative caravel or such like, the matter is easy, because our information about these (with the exception of the Santa Maria) is so vague that one may, more or less, suit one's fancy, but if he desire an accurate scale model of the eighteenth or nineteenth century ships it is no so easy. One has to gather data from old prints, drawings and books or from contemporary models. Of the American clippers there is a remarkable paucity of detailed information.

It must also be remembered that, though one guiding principle applied to the rigging of all square-rigged vessels, no two were quite alike (please remember this when criticising how I rove off the main starboard inner buntline). There were even greater divergencies in the nature and arrangement of the deck fittings.

There are (presumably accurate) scale plans of quite a number of vessels' hulls and sails to be bought and the Massachusetts Research Society has just republished a book, last issued in 1848, that is, early in the clipper ship era. This work, The Art of Rigging, will be found invaluable to those wishing to make a model of about that period or later.

A man may or may not have the skill to make a ship model as good as he can buy, but for him, in either case, it will always be infiitely more precious.

Advertising Index will be found on page 284

There Is Distinctive Beauty
In Every Line of the Gordon Deep Sea Cruiser

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GORDON SPECIALIZED DEEP SEA CRUISERS are universally endorsed by real yachtsmen whose taste demands the superlative, and are recognized as the most distinctive 100% sea-going cruisers now being built. Their accommodations for continuous living on board include latest appointments, the most up-to-date and convenient arrangements of living quarters that can be had on any boats of equal size or larger. Gordon Deep Sea Cruisers are exceptionally large, roomy and heavily constructed. They are all-weather boats. Under extraordinary weather conditions Gordon cruisers have proven their exceptional sea-going ability. Also they are exceedingly fast for such sturdily constructed boats. When purchasing your boat buy one whose reputation is second to none and that has proven its undisputed worth. *Buy a Gordon Specialized Cruiser.*

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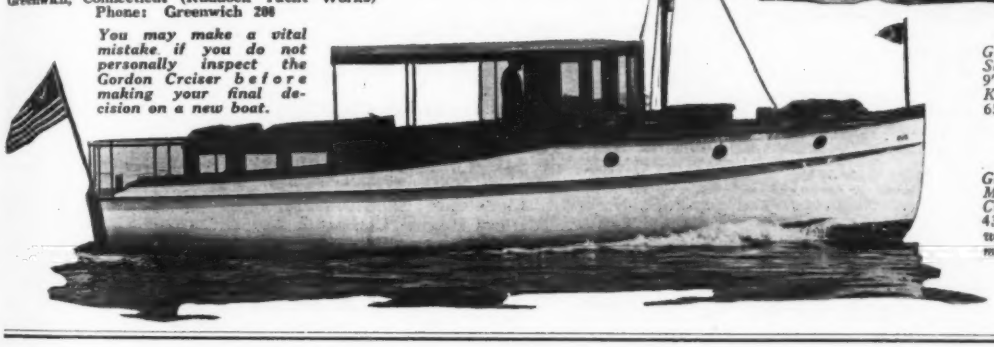
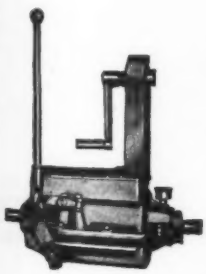
You may make a vital mistake if you do not personally inspect the Gordon Cruiser before making your final decision on a new boat.

Gordon Model B Deep Sea Cruiser, 35' x 9' 3". Powered with Kermath six cylinder 65 H.P. motor.



Gordon Bridge Deck Model C Deep Sea Cruiser, made in 39', 43' and 46' lengths with twin Kermath motors.



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MoToR BoatinG's Directory of 1926 Motor Boat Show Exhibitors

(*Continued from page* 102)

Kidney & Son, Dan.....De Pere, Wis.
Space 1.....Bruno Beckhard
Koven Brothers, Inc., L. O......Jersey City, N. J.
Space 47 and 48.....R. Menthe, P. P. Buesser
Lathrop, Inc., J. W......Mystic, Conn.
Block C.....John Verrier, Leroy Eddy
Lawley & Son, Corp., Geo......Boston, Mass.
Block B-2.....Walter J. McInnis
Lighthouse Bureau.....Washington, D. C.
Mezzanine.....
Loew Manufacturing Co., The.....Cleveland, Ohio
Block D-2.....Frank B. Sexton
Luders Marine Construction Co......Stamford, Conn.
Block B-5.....A. E. Luders

Malone Lemmon Products, Inc......Plainfield, N. J.
Space 41.....W. S. Lemmon
McDowell, Geo. Co......Floral Park, L. I.
Space 12.....Geo. McDowell, Kenneth McDowell
Matthews Company, The.....Port Clinton, Ohio
Block A-4.....Carl S. Matthews
Maybach Motor Company.....New York, N. Y.
Block A-7.....F. W. Von Meister
Mianus Diesel Engine Co......New York, N. Y.
Block L.....Peter G. Schilling
Milton Boat Yards.....Rye, N. Y.
Block A-5.....Thomas D. Scott
McDuff & Co......Lakeport, N. H.
Space 81.....Geo. A. Quimby
MoToR BoatinG.....New York, N. Y.
Space 52, 53, 57, 58..C. F. Chapman, W. F. Bailey, F. W. Horenburger, A. E. Snyder, R. V. Pitman, A. E. Sedgwick, C. F. McHugh
Mower, Charles D......New York, N. Y.
Space 152.....Charles D. Mower

National Carbon Co., Inc......New York, N. Y.
Space 106.....H. A. MacMullan
National Marine Lamp Co......Forestville, Conn.
Space 62.....E. Geruldsen
New England Boat Works, Inc......Riverside, Conn.
Block B-4.....Carlton Bradley
New Jersey Motors, Inc......Keyport, N. J.
Block J.....C. A. Carlson
New Jersey Paint Works.....Jersey City, N. J.
Space 34.....A. G. Fairweather
Negus, T. S. & J. D......New York, N. Y.
Space 88.....J. D. Negus
New York Cordage Co......New York, N. Y.
Space 65.....W. L. Rochester
Niagara Motors Corp......Dunkirk, N. Y.
Block M.....Charles Narraway

Oakes & Dow Co., The.....Boston, Mass.
Space 68.....
Ovington Brothers Co......New York, N. Y.
Space 42.....R. I. Goetchus

Packard Motor Car Company.....Detroit, Mich.
Block F-2.....G. H. Brodie
Palmer Bros. Engines, Inc......Cos Cob, Conn.
Block C.....E. E. Palmer, C. A. Hathaway
Paragon Gear Works.....Taunton, Mass.
Space 21, 22.....R. Wastcoat
Peerless Marine Motor Corp......Buffalo, N. Y.
Block D-2.....Edward L. Grimm
Petersborough Canoe Co., Ltd......Ontario, Canada
Space 2.....Bruno Beckhard
Perrine, J. H......Barnegat, N. J.
Block B-4.....J. H. Perrine
Portable Light Co., The.....New York, N. Y.
Space 66.....W. V. Boom, J. S. McRea
Purdy Boat Co......Port Washington, L. I.
Space 7.....Ned Purdy, W. Harper, Jr.

Rajah Auto Supply Co......Bloomfield, N. J.
Space 13.....Robert A. Bell
Red Wing Motor Co......Red Wing, Minn
Block C.....J. R. Trautner
Remington Oil Engines, Inc......Keyport, N. J.
Block J.....C. A. Carlson
Richardson Boat Company.....North Tonawanda, N. Y.
Block A-4.....G. R. Richardson
Rigg's Yacht Agency.....New York, N. Y.
Space 14.....J. L. Rigg
Sandusky Boat & Cabinet Works.....Sandusky, Ohio
Space 3.....Alven Reinke
Scandia Company, The.....Newark, N. J.
Space 61.....W. B. Bronander
Schellenberg & Sons, B......Brooklyn, N. Y.
Space 46.....Wm. M. Eldridge
Scripps Motor Company.....Detroit, Mich.
Block H.....C. G. Taylor, H. P. Hellmuth
Sea Sled Corp., The.....West Mystic, Conn.
Block B.....John A. Eyre
Sexton Motor Co., Inc......New York, N. Y.
Block M.....F. B. Sexton
Smith & Sons Boat Co., Chris......Algonac, Mich.
Block A-7.....Chris Smith, Jay Smith
Smith & Company, Edward.....Long Island City, N. Y.
Space 23 and 24.....A. W. Roberts
Smith-Meeker Engineering Co......New York, N. Y.
Space 31.....C. G. Meeker
Smith & Serrell.....Newark, N. J.
Space 112.....R. A. Smith
Snow & Petrelli Mfg. Co......New Haven, Conn.
Space 71.....A. T. Nabstedt
Sperry Gyroscope Co., The.....Brooklyn, N. Y.
Space 150.....R. B. Lea
Splitdorf Electric Co......Newark, N. J.
Space 37.....L. E. Farine
Stearns Motor Manufacturing Co......Ludington, Mich.
Block L.....W. W. Cromley
Sterling Engine Company.....Buffalo, N. Y.
Block E.....M. E. Mutchler, C. A. Criqui
Stromberg Motor Devices Co......Chicago, Ill.
Space 78.....W. L. O'Neill
St. Louis Meremac Canoe Co......Valley Park, Mo.
Space 1 and 2.....Bruno Beckhardt
Sutter Brothers.....New York, N. Y.
Block D-1.....John A. Sutter
Tiebout, W. & J......New York, N. Y.
Space 18, 19, 20.....John Tiebout, Jr.
Topping Brothers.....New York, N. Y.
Space 104 and 105.....Joseph N. Topping
Toppan Boat & Engine Co......Medford, Mass.
Block B-8.....A. W. Toppan, H. M. Lewis
Tucker, E. H......New York, N. Y.
Space 26.....Ed. H. Tucker
United States Power Squadrons, Inc......New York, N. Y.
Mezzanine....H. A. Jackson, Dean Potter, T. I. Coe, P. J. Downey, Jr.
Universal Motor Company.....Oshkosh, Wis.
Block K.....E. H. Huesener
Valentine & Company.....New York, N. Y.
Space 54 and 55.....Dorning Walker
Van Blerck Engine Corp., Joseph.....Plainfield, N. J.
Block E.....Joseph Van Blerck, Wm. E. Gibb
Verrier, Eddy Company.....New York, N. Y.
Block C.....John Verrier, Leroy Eddy
Waldron Corporation, John.....New Brunswick, N. J.
Space 112.....Horace F. Field
Waterway League of America.....New York, N. Y.
Mezzanine.....W. S. Rauch, Otto B. Schmidt
Wells, John H......New York, N. Y.
Space 36.....Harry J. Fair
Wheeler-Schebler Carbureter Co., The...Indianapolis, Ind.
Space 59.....George T. Buggs
White Company, Kelvin & Wilfred O......Boston, Mass.
Space 79.....Wilfrid O. White
White & Company, E. M......Old Town, Maine
Space 1.....Bruno Beckhard
White Warner Company, The.....Taunton, Mass.
Space 67.....H. V. Carman
Willis, Company, The E. J......New York, N. Y.
Space 83, 84, 85, 87.....W. E. Willis
Wood, Inc. Gar.....Detroit, Mich.
Block B-6.....J. W. Galloway, J. H. Lyon
Woolsey Paint & Color Co., C. A......Jersey City, N. J.
Space 17.....J. A. Johnson, Arthur Tompkins
Wright Aeronautical Corporation.....Paterson, N. J.
Block A-6.....J. T. Hartson
Zundel Co., Inc., R. W......New York, N. Y.
Space 75, 76.....R. W. Zundel

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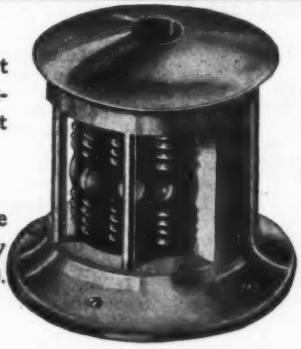
Body in one piece casting and highly polished. Price $10.



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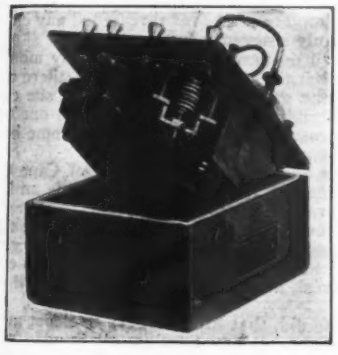

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IF YOU value your life and the lives of your family and guests, you would never venture forth on a cruise without having means of communication with the world in case you meet with disaster. Here is a real compact and portable tuned spark coil transmitter, 6½x7½x4½ inches, that will not only give you the sense of security against the unexpected but also puts you in touch at will with friends on shore and at sea. Thoroughly durable and made to Government specifications. Wave length 100-300 meters. The essential parts, made of the finest of materials, are spiral tuning inductance, induction coil, sending condenser and quenched-spark gap. Operates on storage battery of 6 volts or more. Brand new, in original cartons.

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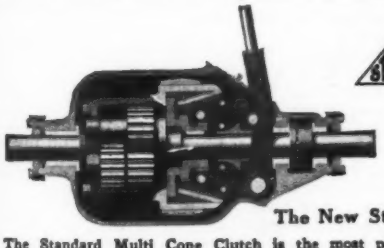

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The Standard Multi Cone Clutch is the most positive, yet most easily operated motor boat gear control on the market. The cones cannot buckle, warp or stretch, and the longer they are used, the better they get. A feature of the new clutch is its easy adjustment.

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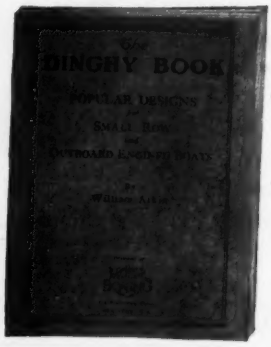


A Book of Small Boats You Can Build Yourself

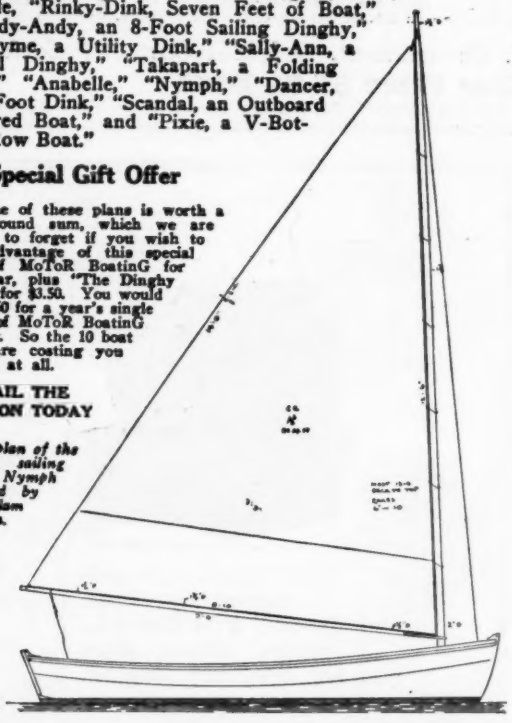
THE NEW DINGHY BOOK is just out and includes 10 complete designs for small boats from a seven-footer to a 12-foot Dink. You can build a boat from any of these plans without further professional help, because they are designed particularly for amateur construction. All drawings are reproduced accurately, with complete building instructions and valuable hints on construction.

These boats were designed by William Atkin, America's leading small boat designer, and include, "Rinky-Dink, Seven Feet of Boat," "Handy-Andy, an 8-Foot Sailing Dinghy," "Carryme, a Utility Dink," "Sally-Ann, a Useful Dinghy," "Takapart, a Folding Punt," "Anabelle," "Nymph," "Dancer, a 12-Foot Dink," "Scandal, an Outboard Motored Boat," and "Pixie, a V-Bottom Row Boat."

Special Gift Offer

Any one of these plans is worth a good round sum, which we are willing to forget if you wish to take advantage of this special offer of MoToR BoatinG for one year, plus "The Dinghy Book," for $3.50. You would pay $3.50 for a year's single copies of MoToR BoatinG anyway. So the 10 boat plans are costing you nothing at all.

MAIL THE COUPON TODAY



Profile plan of the 10-foot sailing dinghy Nymph designed by William Atkin.

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Gentlemen: I desire to take advantage of the Special Offer of one year's subscription to MoToR BoatinG and "The Dinghy Book" for only $3.50. Enclosed find $3.50 (or I will remit $3.50 on receipt of your bill).

Name .....

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City ..... State .....

Foreign postage other than Canada, $1.00 extra a year.

Iron Ships and Iron Men

(Continued from page 25)

comfortable like in their bunks while they cruise through the Canal. No, son, things are different now and there's no use talkin' otherwise. Our real he-man sailors were in the days of wooden hulls; we've not got them to-day, son!" And the old sailor of clipper days looked out to the sea again.

Is my old friend the sea captain right? Is this an age of iron ships but wooden men? Have courage and bravery, attributes of real manhood, passed out with wooden hulls? Ask any old salt you meet and he'll answer yes. Ask many of our yachtsmen and they'll give the same answer. Play the role of inquiring reporter and ask the first ten men you meet the same question and they'll answer in the affirmative.

It was the early part of October that I talked with my friend the captain. That was down Gloucester way. About a week later I picked up a newspaper and read of the storm of October 9th. In particular I read about the U. S. Coast Guard Patrol Boat No. 238. When that storm broke No. 238 was on duty. After many hours had passed and she did not report, the officers at Section Base Five, Dorchester Bay, became worried. And De Coteaux, Chief Radio Operator, sent out a message. "Hello, hello No. 238! Come in! Come in!" At that particular moment No. 238 was wallowing in heavy seas over one hundred miles east of Cape Cod; seas just as heavy, just as dangerous as ever threatened any clipper ship—and No. 238 is only a seventy-five footer!

The night passed and no news of No. 238. Early morning found De Coteaux still at the radio. Then, finally, there came word from No. 238. She gave her position as best she could and added, "We're all right—holding our own—no one even sea sick." The next message came to De Coteaux some hours later, "238 out of fuel and drifting—but all well!"

All out of fuel, over one hundred miles east of Cape Cod, drifting in a sea whipped to fury by a seventy mile an hour gale—but all well. Think of it!

Late Saturday afternoon De Coteaux, still at his desk got into communication again with No. 238. "Are you all right?" he asked. And back came this reply: "Yes—plenty to eat—plenty of water and fresh air—not much land—but we'll ride through!"

And ride through she did, that little seventy-five foot motor boat! All Saturday night, all day Sunday, all Sunday night and Monday until the cutter Tampa finally discovered her. And patrol boats 125, 126 and 147 had similar experiences.

Were the men that made up the crew of No. 238 a lot of sissies, a lot of wooden men? I'll let you answer that question.

Has courage and has valor passed out with wooden hulls? The Clyde Line steamer Comanche left Jacksonville on October seventeenth late in the afternoon. A few hours later, just off Mayport, there was an explosion and fire was discovered in hold No. 2 forward. The crew fought the flames. The wireless operator sent out his S O S calls and the tanker Reaper and the Pilot Boat Mota answered. Two boats were lowered from the Reaper, only to be smashed against the side of the tanker. A lifeboat of the Comanche was swamped and Chief Engineer Gaudet of the Comanche rescued Captain Curry, whose leg was broken, and nine passengers. Captain Singleton of the Mota was praised by the survivors for his rescue work. Were these men sissies? I'll let you answer that, too.

Three days later, on October twentieth, Captain Paul Grening of the President Harding, United States Lines, rescued twenty-eight members of the crew of the Italian freighter Ignazio Florio.

The freighter left Montreal the early part of October bound for an English port. She had fair weather for a few days. Then the wind swung around to northwest and blew up to gale strength and worked up mountainous seas. One huge wave swept the second officer overboard. The storm increased in violence and the steering gear was carried away. Then next the engine room was flooded and the cargo of grain shifted so as to throw the freighter almost on her beam ends. The great seas that swept over her decks smashed the lifeboats and loosened one of the derricks, that fell crashing down into the storeroom.

The President Harding was 150 miles away when she got the first S O S. Captain Grening replied, gave his position and advised that he was hurrying just as fast as he could. And all night long he kept sending reassuring messages. When finally he arrived the seas were too great to attempt any rescue work; two boats were smashed. The wind was then blowing seventy-eight miles an hour. Captain Grening stood by. Finally after many hours the rescue was made; but only after heroic work on the part of Captain Grening, Chief

(Continued on page 350)

Advertising Index will be found on page 384

Shanghai's Last Voyage

(*Continued from page 32*)

which finally wore out. It is always a question on a motor boat how many and what extra parts one should carry. We had always enough bolts, nuts, springs, piping and odds-and-ends for all minor repairs.

Many visitors came to see Shanghai, well wishers and advisers to give their opinions. One sapient admonition was that of a man who stood a long while looking and considering until finally he solemnly said, "The engine most certainly should be painted." He was so insistent about it that he almost wept when we left without having the engine painted.

We started June 26 and sailed up the sound of the Baltic and into the Cattegat. Shanghai was a perfect boat, double ended, 47 feet over all, flush decked, 42 foot water line and 16 feet 3 inch beam. She was planked and decked with teakwood and had frames of elm. Her net tonnage was 29 and gross 31+. She was ketch-rigged and built after the design of Collin Archer. In appearance she was rough and sturdy like a sea bird—full breasted and strong. Double ended and steered with a tiller she was a combination of the old Viking ships and the modern Redingsboite or life saving boats of the North Sea. The steering was done from a deep self-bailing cockpit across which was a heavy beam on which the mizzenmast was stepped and companionway to the engine room was from the cockpit. There was a double partition and thick planking between the main cabin and the engine room. This was a distinct advantage as the smell of oil and kerosene never got into the cabin. The cockpit was a deep well giving protection to the helmsman in bad weather. It seemed to us an excellent arrangement but were astonished at the comment of one of our visitors and advisers who said, "That is the most dangerous thing I have ever seen on any boat. If that cockpit gets filled up with water you would have a terrible time getting the water out. You are bound to have many waves coming on board when it rains, so you will spend all your time bailing. Besides, the man who is steering might get drowned." We decided to run the risk and thanked our visitor telling him we would have to consider his advice and perhaps have an umbrella placed over the cockpit.

The engine room was wide and had room on both sides and stowage aft on shelves either side of the cockpit. The fuel tanks held from fifty to sixty gallons each and we easily carried extra cans holding as much as sixty more. Besides this we could have lashed a barrel of kerosene on deck. We started out with about 150 gallons and as the consumption was about one and a quarter gallons an hour and the engine, although only ten horse power, would drive the Shanghai in a calm sea about five knots, we had enough for 500 miles. None of the runs we were to make were to be over 700 miles. Allowing then for using the motor one-half the time we had plenty of fuel. The only questionable part was whether we could find a supply in Greenland, for the two long legs of the voyage were to be from Iceland to Greenland and Greenland to Labrador. The total of the two runs was to be 1,300 or 1,400 miles but, we planned to save for contingencies and be sparing of fuel. We had estimated that we should use the motor not more than one-fourth of the time.

On the run from Copenhagen to Bergen which was something less than 500 miles we did not use the engine much. Coming out of the harbor and up the sound we were able by the afternoon to sail our course through the Cattegat and after that at the Skagen where we met a westerly gale from the North Sea, there was no question of using it again until we came into fjord that leads to Bergen. In a heavy sea or against the wind the engine was useless. If the sea was smooth and there was enough wind to move the thirty-one tons of Shanghai, it was a mere waste of fuel. The engine would not increase the speed a knot.

We had rough weather all the way to Bergen and reached there at three in the morning of July 3. My son met us at Bergen and the two men, Vanman and Hielman whom I had taken with me went back to Copenhagen by rail and ferry. We were surprised to find Nutting, Hildebrand and Todahl at Bergen in the Lief Ericsson. They had started from Christiansand June 6 and we had not left until the 26th but they had been having a lazy time exploring the fjords along the Norwegian coast. They started the next day, July 4, for the Shetlands and Faroes. We had our boat provisioned and outfitted and started westward July 10. We found only one of our tanks was half empty so that we had used only 25 gallons on our first 500 miles.

We had taken on two Norwegian sailors at Bergen, who, with Chanler Chapman, my son Jay and myself, our crew consisted now of five. We had calmer seas and little wind on the 400 mile run to the Faroes and so used a full tank and there we took on fifty gallons more fuel. This proved to be a poor investment as there was water in the kerosene and it all had to be strained. We felt rather bitterly about it but we had the satisfaction of finding that the man who supplied the kerosene had left one of his large, expensive, 15 gallon cans on board and as he will never recover it unless he searches the Nova Scotia coast we knew we were even with him.

At the Faroes we had again caught up with Nutting on Lief Ericson. We started together for Iceland. It was on this 400 mile leg to Portland Head, the southern point of Iceland, that we used the motor nearly all the way. The winds were very light and the sea smooth so that the course could be made straightaway. We reached Reykjavik, the capital, on July 21 but Nutting did not arrive until the 27th and on the 28th we started for Greenland. Nutting promised to follow in three days but actually did not start until August 8. The world fliers being then expected in Reykjavik, he waited until they came. At Reykjavik we took on a full barrel of kerosene and this except for 50 gallons at Battle Harbor, Labrador, which we hardly used at all, was our last purchase of fuel for the Shanghai. In Greenland we could have gotten a supply but it meant going two hundred miles more. At the small settlement of Narsak there was none. We were careful of using our fuel on the voyage from Iceland to Greenland so that when we did start for Labrador we had ample.

It is always a mistake to make yourself out more of a fool than you really are. I began my book with the introductory sentence, "You are certainly the prize lunatic." And it was assuredly an error for many people have told me I was right. I realized that I had been rash to attempt to cross the Atlantic, landlubber as I was and landsmen as most of my crew were, but I felt that if I overstated the case in the beginning most of my readers would be disarmed and not take me too literally. Quite the contrary happened. About two out of every three who have read the book or heard any talk about the Shanghai have said what a crazy thing to do and how foolish; but many have felt the impelling force of the adventure. Our justification is that we did get across and that ours was the first small boat ever to sail the Viking Road in modern times. Except for the hurricane at the end with the consequent shipwreck we should have completed our trip and arrived safely.

"But," say some of my skeptical friends, "you would not have got as far as you did unless you had been extremely lucky." Of course we were lucky, but I submit to those friends and especially relatives for it is always relatives who are in the habit of making the most incisive and affectionately scornful remarks—that we did organize a cruise; that we sailed some 3,500 miles in 37 sailing days; that we went to unfrequented and dangerous coasts, into unknown harbors and through ice and storms.

For fourteen hundred miles from Iceland to Greenland and from there until we reached the Labrador Coast, we never saw a ship or a boat except for the kyaks of the Eskimos at Narsak in Greenland. I shall never forget the sight of the first kyak when we were looking for Narsak, and that first fishing dory when we made the Labrador Shore, nor indeed the sight of the beautiful, white, three-masted schooner at Cape Farewell which turned out to not be a schooner or a battleship or a merchant ship but simply a monster iceberg, floating huge and immense two or three points off our course.

The world fliers were due to arrive in Iceland a few days after we left and Lieutenant Crumrine, whom we saw often in Reykjavik had been there for some time arranging for their due provisioning, outfitting and reception. He was an intelligent as well as obliging and capable young army officer. He had given us charts, photographs, statistics and directions about Greenland. I think we should not have gone to Greenland without the encouragement of Crumrine. I remember one picture of Narsak—or Friedericksdahl as it is called, which with all my other possessions went down with Shanghai, showing a herd of very contented looking cows but which had all disappeared when we came there. The only animal life consisted of a meagre flock of five goats who lived in one of the best huts at Narsak. Crumrine had told us that we were sure to meet up with the American Navy who would

(*Continued on page 353*)

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Iron Ships and Iron Men

(*Continued from page* 348)

Officer Stedman and the crew of the President Harding. Again I'll ask that question: Has valor and has courage passed out with wooden hulls? And again I'll let you answer.

And if there is any doubt in your mind as to the right answer, just skip over thirty days to November seventeenth. On that day the Lenape, of the Clyde Line, left New York for Jacksonville. That night, just as she was south of Atlantic City, fire was discovered; and it spread with great rapidity.

Captain Devereux sent out S O S calls. But as he did so he gave orders for full speed ahead—and headed for Delaware Breakwater.

The cutter Kickapoo answered the call, but within two hours she was advised by Captain Devereux that apparently the fire was under control and he felt certain of landing his passengers in safety. But the Kickapoo kept right on her course—toward the Lenape.

Just off Cape May the Pilot Boat Philadelphia came alongside and a pilot was put on board. Apparently at that time the first was well under control, but just as the Lenape rounded the Breakwater it broke out again to make the Lenape ablaze from stem to stern.

The Kickapoo, the Pilot Boat Philadelphia, Captain Steele, of the Lewes Coast Guard, in a small patrol boat, and ever so many small craft hurried to the burning steamer.

Passengers jumped, some dropped to the water, where they were grabbed by men in the smaller boats and hurried to the Kickapoo and the Philadelphia. The last man to leave the Lenape was Captain Devereux. And then he went ashore to see if the passengers had been taken care of; to see that all were served with hot coffee.

Has courage and valor passed out with wooden hulls? I think not! The burning Lenape called for courage and bravery and heroic action. And Captain Devereaux, Captain Steele, of the Lewes Coast Guard, the Captain and Pilot of the Philadelphia—ever so many answered that call. Chief Engineer Gaudet of the Lenape stood at his post in the engine room until he was overcome by smoke.

Great courage was shown in that disaster. Cool, calm judgment made possible the rescue of every passenger save one.

And yet Captain Steele of the Lewes Coast Guard talked to me about it as if this business of running a small patrol boat up to a burning steamer, of snatching struggling men and women from the water, was nothing but just so much routine.

I asked him about iron ships and wooden men.

"Most emphatically," he exclaimed, "we have the same type of courage in our sea-faring men of to-day as ever we did in clipper ship days. Think of Captain Devereux coolly, calmly directing his crew fighting that fire. Think of Pilot Charlie Morris, who was put on board from the Pilot Boat Philadelphia. The side of the Lenape was hot when he climbed up. He didn't know how long she would last. He only knew that his job was to pilot her through the treacherous shoals to a safe place, and he went about his job, never once raising his voice, never once showing the slightest trace of excitement. And after his job was done he remained on board directing and helping in the work of rescue until he had to slide down a rope to save himself. Captain Devereux remained on that steamer until he knew that every soul was off—and then he had to jump to save himself. And all was done without creating panic among either passengers or crew. Yes, sir, we have the same courage to-day as ever, and don't you forget it! It makes me tired to hear that expression, iron ships but wooden men. Let any man who thinks that, go spend a week at any Coast Guard Station and he'll get a different idea."

It was the early part of October that I talked with the old sea captain down Gloucester way. After I left him I wondered if we lived in an age of iron ships but wooden men.

It was six weeks later that I talked with Captain Steele. After I left him I knew full well that we lived in an age of iron ships and iron men.

The old captain's viewpoint, however, is a natural one. It is a trait of human nature to long for the good old days when things were different. We do, you and I; our fathers did, their fathers did, too. And our children will.

Times have changed, of course. The sea-faring man of to-day has things a bit easier, a bit more comfortable than did the sailor of clipper ship days. But you and I who live on land find life easier and living more comfortable than did

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Picking the Wheel

(*Continued from page* 90)

propeller as part of the engine equipment was therefore abandoned; and it was determined to develop from Coast Guard experience a ready means of selecting a propeller which would be reasonably close to the requirements of a given case.

It was realized that, for the system to be workable, the usual refinements of design must be eliminated and only the outstanding factors could be considered. So much for the problem.

The fundamental idea of propeller action is that a cylindrical column of water is being thrown astern. The diameter of the cylinder is the diameter of the propeller, and the length of the cylinder which would be projected astern in one minute is proportional to the pitch of the propeller and its revolutions per minute. Going one step further, the power required to turn the propeller is proportional to the weight of the cylindrical column and the speed at which the column is being thrown astern.

It should be stated at this point that, from the purely practical standpoint, we are concerned with the selection of a propeller, and we are not concerned with the actual relation of the various factors, if they will only tie up to each other the same way every time. And so it makes no difference what is the actual horsepower required to throw a cubic foot of water a thousand feet a minute, provided we may assume that double that horsepower would throw two cubic feet of water a thousand feet a minute, or one cubic foot of water two thousand feet. We do not inquire as to the weight of a cubic foot of water, because every other cubic foot of water weighs nearly the same. In fact we may actually not know the horsepower of the engine, for the horsepower of a well designed engine bears a direct relation to the bore and stroke and the number of cylinders, or in other words the piston displacement.

The problem then simplifies itself to the determination of how these various factors link up.

In obtaining the data for a beginning, the simple expedient was adopted of fitting different sized wheels on the same boat and then determining by experiment the maximum number of revolutions that could be obtained with each. With data thus obtained from a number of engines of different sizes and powers a number of preliminary curves were developed. The arbitrary assumptions on which the curves were based are as follows:

(a) That the throttle is wide open, and that the engine speed is determined solely by the load of the propeller.

(b) That the power absorbed by the propeller is proportional to $d^3p \times r.p.m.$, where d and p are the diameter and pitch respectively of the propeller. The theoretical relation between power and $d^3p \times r.p.m.$, need not concern us at this point.

(c) That for a given power at any given $r.p.m.$, d^3p is constant; i.e., p is inversely proportional to d^3.

(d) That the power the engine can develop is proportional to piston displacement multiplied by $r.p.m.$, and hence that piston displacement is proportional to d^3p.

Curves were plotted between $r.p.m.$ and d^3p from results obtained under conditions assumed in (a). Other curves derived from these were plotted between piston displacement in cubic inches and d^3p for engine speeds varying from 700 to 1,000 $r.p.m.$ The results attending the use of these curves on a number of installations proved to be very encouraging.

The chart in its present form is a development of the original experimentad curves. It should be considered as applying to broad bladed wheels such as the Ailsa Craig and the Hywinco three-blade propellers; and to L-head or T-head four-cycle engines. Other types of engines or propellers would give results higher or lower than shown. For example, a valve-in-head engine with four valves per cylinder is found to take a propeller whose d^3p is about 15 per cent higher than a two-valve L-head or T-head engine of the same size.

No method has suggested itself of plotting the figures for two cycle engines because the power curves are extremely erratic, particularly as between the so-called heavy-duty engines and those of higher speeds.

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Shanghai's Last Voyage

(*Continued from page 349*)

be cruising off Cape Farewell at the time we reached there. He promised to send wireless messages for them to watch for Shanghai and we were anxious to meet some of the American Navy.

You can imagine with what delight we sighted this first ship. We had been driven 50 miles out of course by a storm the day before and we had to run north to make Cape Farewell for there we ought to find company—we were lonely. Next to the excitement of making a landfall or approaching an unknown coast, the great event of a long voyage is the sighting of another ship at sea. Think of the usual flutter of the passengers on a liner when the rumor goes about that there is a steamer to be seen from the deck. How they hurry through their meals, abandon their shuffle board or deck chairs to rush to the rail and gaze with interested eyes and make sapient remarks when a tanker or tramp is on the horizon. We were equally naive and childish about the schooner. We sighted it far off and from the size of the white sails we realized that it was large. The sea was calm and we were using the motor. But as we drew nearer we were disappointed; the sails began to turn gray and as the sunlight shifted there was a complete change of color. We changed our opinion as to its being a schooner and decided we were sighting one of the cruisers we had been told about. When the warship turned to blue and then to light blue we were again disappointed. It was a monster iceberg, immense and overpowering and we gave it a wide berth.

We lay to for the short arctic night, at four in the morning we pushed in toward the land, the desolate pinnacle shore of Cape Farewell. It was then that we realized how useful it was to have a motor. If Shanghai had not been an auxiliary we could not have done what we did. It was 30 miles along the coast of Cape Farewell to the first settlement of Narsak. The ice was tightly packed within two or three miles from shore. Outside it was floating and loose for ten miles. There were small icebergs and it was necessary to pick our way between the floes. This we could never have done with sail alone. As it was, there was no wind and no sea, so we twisted and turned and often came into a blind lead and were forced to dodge to sea again. It was anxious work. We were looking for signs of habitation on shore and for someone to guide us to Narsak. The day was sunny and warm and the white ice in the blue water gave the effect of some celestial scene. The black, sheer pinnacles of rock with fjords and ravines in between and above the snow mountain with white peaks, five and eight thousand feet high, made an elemental, savage background. We were looking for Narsak, which by the Danes is called Friedricksdahl. As I had been at great trouble to obtain permission to land in Greenland and the Royal Danish government having granted my request had told me that word would be sent of my coming, we felt that we were to arrive in state and that there would be a demonstration or a reception committee to greet us when we arrived. It was therefore with a certain amount of elation that the crew of Shanghai pushed around the point of a steep island and into the bay where the town according to the chart ought to be.

Friedericksdahl was such an imposing name that we expected a city, perhaps trolley cars, electric signs and a hotel. When we had poked along for thirty miles and at last found a point of land with something green on it except the black and white of the craggy coast, we sighted our second boat. This time it was a real one and not a floating piece of ice. The trouble was that it was so small that we could not see much of it. All that was visible even when fairly close was a man apparently sitting on the water. His kyak was so slight and so small that the waves hid it from view. We threw the propeller out of gear until he came up and then lifted him and his kyak on deck. He piloted us in to the metropolis of Narsak. It was an utter disappointment—merely a few stone huts, a mission church and a wooden shed for a store. The reception committee was there and all the inhabitants crowded the icy rocks of the shore. There were 179 Eskimos including women and children, two Danes and the five goats. They had never heard of Shanghai. The Royal permission from Copenhagen to land had not arrived as the annual provision steamer from Denmark had not reached Narsak. Nevertheless, we did land. The Danes and Eskimos treated us well, sold us provisions and traded their furs and sealskin pants and feathers for our old blankets and some extra canned goods which we had on board.

Our motor was again invaluable in coming out of the harbor of Narsak and through the floating ice which was beginning to pack in against the shore. The wind having come up and there being danger of being blocked in the harbor we stayed only two nights.

We had our roughest weather across Davis Straits. It was as variable as the magnetic compass which in these latitudes has often a variation of 35 degrees. We laid our course to Labrador taking an average of the variations. Although we were able to get only two good sights on the run of over 600 miles, they verified our dead reckoning and showed that we were fair navigators. We were impressed with the worth of having auxiliary power. The wind constantly changed. Sometimes it blew like mad, then it would be almost a dead calm. Then it would blow from almost the opposite direction but it was always our motor that allowed us to sail nearly a straight course. The only difficulty was with the hot bulb type of engine that it took so long to start the engine—from 15 to 20 minutes. If we were alert it could be done in ten. The anxiety to turn the flywheel before the vaporizing head of the cylinder was heated sufficiently often made us begin the proceeding over again. We eventually took our time and started it slowly and surely. We had a variety of blow torches on board—the old one which came when I bought the Shanghai; another which I bought in Bergen and a double one which I found in Iceland. We also found that there was not such a great difference in the cost of fuel as we had supposed. Kerosene (or parafine as it is called outside America) is almost as expensive as gasolene at home. We could not use crude petroleum as it dirtied the engine. For the most part we would have done as well with petroleum but it meant more trouble.

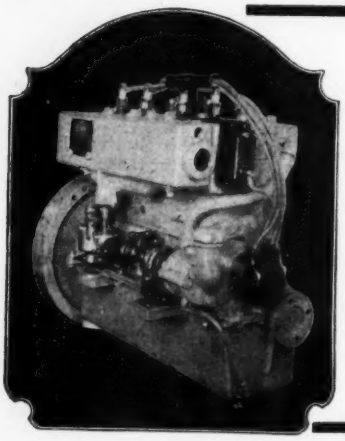
We got across Davis Straits in seven days and on the eighth sighted our second boat. Through our glasses we saw that fishing dory. If we had not turned out of course we should have made our objective, Battle Harbor, within five or six miles. But we were hungry for news and English speaking people. For over a month in Norway the Faroes, Iceland and Greenland we had seen only one or two men with whom to converse. They told us we were within twenty miles of Battle Harbor and we soon began to sight fishing schooners and steamers. We took in the sails and using the engine made the narrow harbor at Doctor Greenfell's mission. There we stayed only one night and on August 15 were ready to start through the straits of Belle Isle and down the western shore of Newfoundland. Our course was to be through the Gulf of St. Lawrence, out Cabot Straits into the Atlantic, round Cape Breton and so along Nova Scotia. We had practically made our trip and were on American soil.

At Battle Harbor, as we were leaving we began to have our first serious trouble with our friend Vanman, the engine. He had behaved so well all through the long trip we had come to think of him as almost self-acting and self-supporting. If he was well fed and well nourished in the matter of oil and grease it was all he demanded. Once or twice we had been provoked but never out of patience. Usually we had blamed him unjustly only to find that we had let the fuel tank go dry. Once in the Faroe Islands we had given him unwittingly watered kerosene and he had nearly left us on a particularly dangerous and ugly rock. We had thought him diverging on us. If it had been a little closer or a little more sea running we would have smashed Shanghai. Another time we had found water in the loop of the supply pipe. Hertofore we had always to apologize to Vanman and assume the blame ourselves.

Now we were getting angry. We had been heating the engine for half an hour and had asked all the hospital force of Dr. Grenfell Mission to come down to bid us good-bye before we sailed for the next-to-the-last leg of our journey home. We were to make the Nova Scotia coast at the town of Shelbourne where we were to refit before sailing for Mount Desert and New York. Our friends stood on the wharf. We kept saying good-bye but Vanman would only hiss and spit or cough and would not go. We had a fisherman pilot on board to take us out the narrow way into the Straits of Belle Isle. He also was growing impatient. Finally there was a hearty chug, another and another although we had taken over half an hour to get started, the beat was regular so we waved farewell.

The engine did not act well and as we shut it off in the straits of Belle Isle we found that the injecting pump was leaking. We managed however, to patch it up the next day and pushed along at three knots an hour to the Bay of Islands where we had been told we could find machine shops.

(*Continued on page 356*)



INTERNATIONAL—16

A STURDY ENGINE FOR RUNABOUTS, CRUISERS AND WORK BOATS

The International—16 is built from the ground up for marine service. Four cylinders, four cycle. Bore 3¼ in.; stroke 4 in. Develops 10 H.P. at 500 R.P.M. and 18 H.P. at 1200 R.P.M. You can depend upon the International for steady and economical service through many years. It runs smoothly, quietly, powerfully and free from vibration. It is easy to start and easy to control because it is so flexible. And the price is within reach of any one's pocket—$225.00.

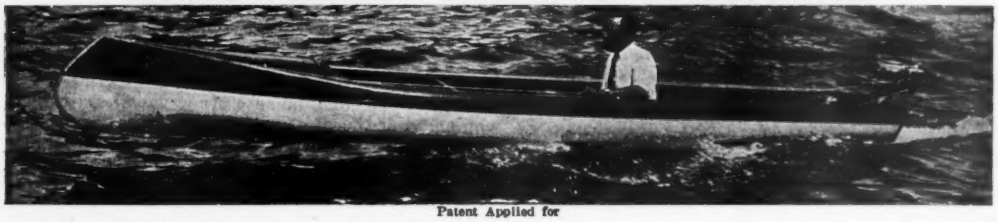
Joes Gear enclosed type, optional, $75.00 extra. Syracuse enclosed type Gear, optional, $61.00 extra. American Bosch High Tension Magneto, $35.00 extra. Standard equipment—Bosch High Tension Battery equipment and Schebler Carburetor.

WRITE TODAY FOR FULL PARTICULARS

SUTTER BROS., 44 Third Avenue, New York, N. Y.

Export Agents: Miranda Bros., 132 Nassau Street, New York

ARROWHEAD—MERACO SPEEDSTER

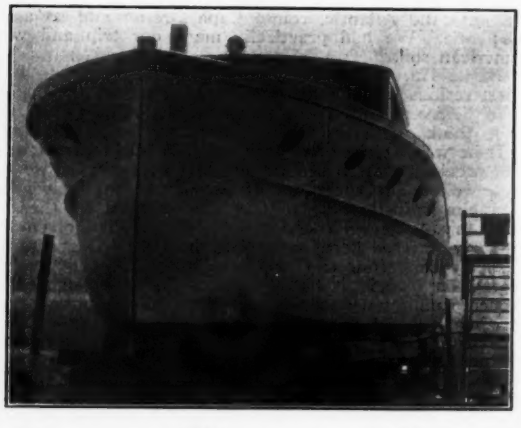


Patent Applied for

OUT-BOARD MOTOR FANS—Here is the boat that created such a sensation throughout the 1925 season. More than 350 sold after its first appearance on the market early in the year to the lovers of out-board motor boating.
The most convincing record of its popularity is, that it was unanimously chosen by the five leading manufacturers of out-board motors for their entries in the Speedster race of the Gold Cup Races at Manhasett Bay, N. Y.
The Winning Speedster of the Gold Cup Race will be on exhibit at the New York Motor Boat Show. Don't fail to see it. Mezzanine Space 1.
Write for handsome illustrated catalog showing other distinct models and our remarkable record for 1925.

SOMEONE HAS TO LEAD—WE ARE!

ST. LOUIS-MERAMEC CANOE CO., 302 Marshall Avenue, Valley Park, Missouri, U. S. A.



Own a Pioneer Boat

We Have Facilities for Building Large Yachts

Build Your Own Boat From Our Knock Down Frames or Patterns

Let us know your requirements and we will furnish estimate from your or our dseigns.

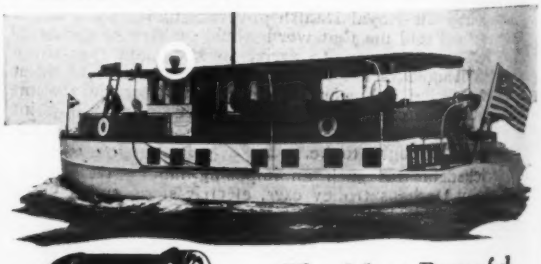
Write for details of our new line of boats and designs from a yacht tender to 150 ft. yachts and commercial boats.

PIONEER BOAT & PATTERN CO.
GTRR Bridge West Side, BAY CITY, MICH.

LEBBY

TRADE MARK REG. U.S. PAT. OFF

Lights the Way for CHARLON II



Lebby Searchlight. Cabin Control Type.

The Most Powerful Incandescent Searchlight of Its Size

NO night accidents are invited by the new house yacht Charlon II, owned by Mr. E. A. London, of New York. The powerful shaft of light from her Lebby searchlight will turn the darkness ahead into daylight and lay bare any lurking dangers that jeopardize night cruising.

Lebby Seachlights are the result of years of experience in marine searchlight design and construction. Objects from one-third to one mile away are readily picked up. The Lebby is manufactured of solid brass throughout and is guaranteed to stand up under severe conditions.

Five sizes, 6-12-25-32 and 110 voltage. Four types, polished brass, battleship gray, nickel-plated and black nickel.

Let us know your requirement.

THE NATIONAL MARINE LAMP CO.
FORESTVILLE, CONN.

Advertising Index will be found on page 384

Goodrich

Cutless *Bearings*

Equip Lawrence P. Fisher's Margaret F. II

A view of the two 300 h.p. Speedway motors which give the Margaret FII its "pep".

Built by Consolidated Shipbuilding Co., Morris Heights, New York City

This graceful and speedy craft, the property of Lawrence P. Fisher, President of the Cadillac Motor Car Co., is equipped with Goodrich water-lubricated bearings because of their proven outstanding advantages—elimination of wear and reduction of vibration. They insure smoother, quieter running and effect a material reduction in drydocking expense.

The tough rubber surface—known as Olivite—has greater wear resisting qualities than any other known material. The inner helical groove assures, through the action of the shaft, a constant lubrication by water. Shaft scoring is practically eliminated. Supplied for any size craft—from a motor-runabout to a tanker.

The cabin, roomy, well lighted and convenient. John H. Wells, Inc., are the designers of the Margaret FII.

THE B. F. GOODRICH RUBBER CO.
Established 1870 *Akron, Ohio*

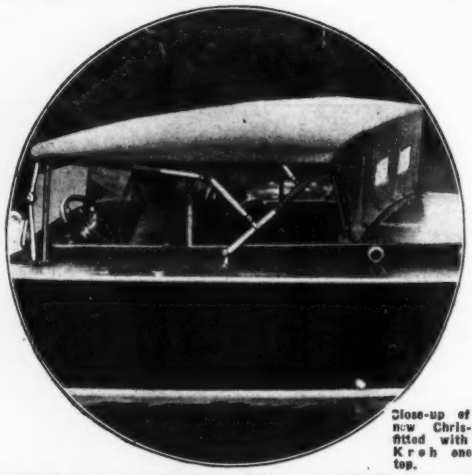
CUTLESS BEARING DISTRIBUTORS:

New York City - Topping Bros.
Philadelphia, Pa. - Marine Equipment & Supply Co.
Boston, Mass. - Walter H. Moreton Corp. and United Fisheries Co.
Gloucester, Mass. United Fisheries Co.
Jacksonville, Fla. Gibbs Gas Engine Co. of Florida
San Francisco, Calif. - B. F. Goodrich Rubber Co., 650-2nd Street
Los Angeles, Calif. - B. F. Goodrich Rubber Co., 1386 E. 7th Street
Seattle, Washington - B. F. Goodrich Rubber Co., 115 King St.
Chicago, Ill. - B. F. Goodrich Rubber Co., 1925 S. Michigan Ave.
Detroit, Michigan - B. F. Goodrich Rubber Co., Woodward and Garfield.

THE KROH

One Man Tops for Boats

Kroh tops are standard equipment on Chris-Craft and are used by the foremost builders of runabouts, including John L. Hacker and Purdy Boat Co.



Close-up of the new Chris-Craft fitted with the Kroh one-man top.

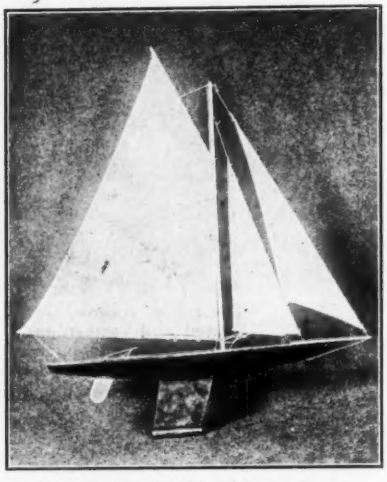
ONLY the best grade of materials are used in Kroh tops; the frame is white ash; the fabric is extra heavy and waterproof; brass or nickel trimmings. We make tops to order and guarantee the fitting.

Write today for estimate. Also ask for catalog showing Kroh Boat Tops, Spray Hoods, Life Preservers, Cushions and Pillows.

C. Z. KROH MANUFACTURING CO.
1920 LINWOOD AVE. TOLEDO, OHIO

Just Like the Big Fellows

IN APPEARANCE and in sailing, Marblehead Model Yachts are just like the big famous sailing craft after which they are copied. There is a thrill in sailing a Marblehead yacht that you don't get from the average type small boat. Give your boy a Marblehead Model Yacht. They Are Built by Hand, Correctly Designed and Rigged, Perfectly Balanced and Really Sail.



BAR HARBOR CLASS—24 Inches

This is one of our seventeen models. The Bar Harbor class is very popular because it is extremely light and fast. Has hollow hull. Rigged with Mainsail, Forestay and Jib. Finished in Black and Red, Black and Green, Natural and Red, Natural and Green. The same hull without bowsprit can be had with special racing Marconi Rig. Price, either Bar Harbor or Marconi, $12.50, including cradle and carrying charges.

MARBLEHEAD MODEL YACHTS, Inc.
TWO STATE STREET, MARBLEHEAD, MASSACHUSETTS

Shanghai's Last Voyage

(*Continued from page* 353)

It was here that the railroad approached the coast and if necessary we could go to St. John for extra parts.

There and at Humber Meadows we spent three days before we gave up the engine and decided to go on without. Norwegian motors were not understood in Newfoundland and we were sure of finding adequate repair shops at Sydney or Halifax. So we drifted out the Bay of Islands and with light winds sailed slowly down the Cabot Straits and out into the Atlantic. All these days our Norwegian sailor, Ask, kept working on the engine. He would be up at five and stick to it until dark. He could hardly eat a meal. If he had been less phlegmatic he would have had a nervous breakdown. Afterwards when we came to New York and Shanghai had been wrecked he said that he did not dream so much about the shipwreck as about the engine. He could not sleep, he said, and the engine was a good engine and was so near the shore that probably some Nova Scotian had tried to salvage it. "And I'll bet," said Ask, "if he did try to make it go he is still working on it or he is in a lunatic asylum."

We had rounded Cape Breton and were off Causo on the night of August 26 when the hurricane from the West Indies struck us. It had been moving up the coast but we had no warning as we had not been into harbor for five days. The wind blew ninety to a hundred miles an hour and the waves were sixty or seventy feet. We had gone off shore thirteen miles before we had laid our course along the Nova Scotia coast. It was the worst storm for fifty years and we were driven to the shore. That we escaped at all was a miracle. We hit the outer reef, were blown over it and striking four more rocks were finally thrown against White Bluff about 12 miles west of Causo. We were directly against the face of the bluff and were so close that owing to the courage and bravery of Ask who first got a rope ashore we were all able to escape with our lives. We lost the Shanghai and all our possessions but were thankful that none of us were injured and that we were alive.

It was a terrifying experience and there have since been many sleepless nights wondering how Shanghai could have been saved. Undoubtedly, if the engine had been working we could have gone about which we were unable to do as our sails were stripped, but there was no possibility of making headway. We would have been driven no matter which way the boat was headed. We were able to keep the boat headed up to the wind for we had our mizzen sail but we were being driven ashore more by the tremendous force and height of the waves than by the wind itself. Of course, we could not have made any headway. In Louisburg Harbor at Cape Breton, yachts at anchor with two engines going dragged both anchors. Yet, I cannot help feeling that if we had been able to start our engine we might have been able to get further to sea and at least gain the few hours until the hurricane was past. However, Shanghai is gone.

Iron Ships and Iron Men

(*Continued from page* 350)

our fathers. But because a man lives more comfortably does it mean that he becomes less brave, less courageous? Does comfortable living mean that he turns coward when he ought to turn hero? To believe that is to go back to the old philosophy of asceticism, isn't it? Is character developed only through suffering and privation and want? Must a sailor suffer from survy and vermin and sleep on boards and be knocked about by a mate to develop bravery, courage?

That quality of courage is just the same to-day as it ever was; it will be just the same to-morrow as to-day; the same next year as this, and the same in all the years to come. Bravery is a tradition of the sea. A tradition held high by all who go down to the sea in ships.

Wooden men and iron ships in the days that are gone, yes, and to-day iron ships and iron men—the same iron men as of old.

W. W. Kiss Joins Elto

Ole Evinrude, President of the Elto Outboard Motor Company, announces the appointment of William W. Kiss as Advertising Manager. Mr. Kiss comes to the Elto organization with a long record of successful executive experience in the merchandising and advertising fields.

In his new connection Mr. Kiss will not only direct Elto publicity, but will devote a large portion of his time to intensive cooperation with the swiftly growing dealer organization of this institution.

Advertising Index will be found on page 384

Matthews—"38"

A Standard for Comparison

A Matthews "38" Special Double-Cabin Cruiser traveling at 20 miles per hour with 200-H.P. Motor installed.

Why Experiment?

The remarkable low price with Matthews quality made possible by large production and modern manufacturing methods on the Matthews "38" makes this boat *the world's greatest buy.*

The Matthews Company,
Port Clinton, Ohio.

Tampa, Florida,
December 12, 1925.

Dear Mr. Matthews:

I have had my boat just three weeks and thought you would be interested in knowing what a hit this cruiser is making in Tampa. I have probably shown a half hundred boat lovers the conveniences and in-built quality of this boat, and the usual remarks are, "How can they do it for the money?" As you are probably aware, this is the first Matthews "38" in Tampa, and I have no doubt there will be many others provided you can build them fast enough.

Very truly yours,

Wm. E. Deane, Memorial Highway, Tampa, Fla.
R. F. D. 4, Box 100.

NOTE: Mr. Deane is the owner of a Matthews "38" Standard cruiser equipped with a 6 cylinder Kermath motor.

"Matthews 38"

THE MATTHEWS COMPANY
Port Clinton, Ohio

Distributors of the Matthews "38"

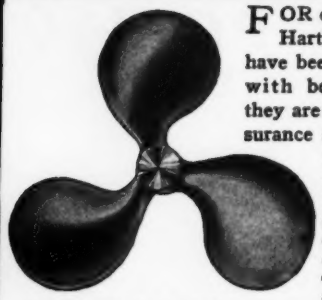
Seaboard Ship Brokerage Corp., No. 4 Datura Arcade Bldg., West Palm Beach, Fla., and 8254 Michigan Ave., Chicago, Ill.

Walter H. Moreton Corp., 780 Commonwealth Ave. Boston, Mass.

Stephen F. Murphy, Alexander Bldg., San Francisco, Cal.

F. W. Hardcastle, 210 South Ave., 57, Los Angeles, Cal.

HARTHAN
TRUE SCREW
PROPELLERS



FOR over twenty years Harthan propellers have been making friends with boatmen because they are sold with the assurance of absolute satisfaction.

Harthan True Screw Propellers are the product of master craftsmen. More efficient, dependable or durable wheels are not made.

Harthan wheels are designed so that the greatest area is at the tip of the blade and are tapered down near the hub where the dead water collects. This design secures the maximum thrusting power. They are made of the best bronze obtainable and are perfectly balanced.

Let our engineers aid you in selecting the correct pitch and type of wheel for your boat. Use the coupon below.

MARINE EQUIPMENT & SUPPLY CO.
116 Walnut Street Philadelphia, Penna.

CLIP AND MAIL THIS COUPON NOW

Water line length.....Beam.....
Construction (light, heavy, medium).....
Make of engine.....H.P.....R.P.M.....
Present speed.....Present wheel.....Present R.P.M.....
Name .....
Address .....
"B"

Don't Buy a Boat

Until You Have Seen the Exhibit of the Cape Cod Shipbuilding Corporation at Grand Central Palace, New York, January 22-31, 1926

Builders of Standardized Sail, Motor and Row Boats, on Exhibition at the Show—20-ft. Special Dory Launch, 19-ft. Runabout, 18-ft. Baby Knockabout, 15-ft. Junior Sail Boat, 14-ft. Decked Sailing Skiff, Special boats for outboard motors and row boats.

Cape Cod Shipbuilding Corporation
WAREHAM : MASSACHUSETTS

There's Nothing to It

(*Continued from page* 44)

the name N by W. A study of the compass card on page 42 will show how these names are combined. The points in this last division are, beginning at North and going to the right, N by E, NE by N, NE by E, E by N, E by S, SE by E, SE by S, S by E, S by W, SW by S, SW by W, W by S, W by N, NW by W, NW by N, N by W.

The points on the compass as given, thirty-two in number, are not close enough, however; are not fine enough. You will find, when laying out a course, that the direction you want to steer may lie, for example, between N and N by E. So this space is divided into four spaces; and these points are called quarter-points. Suppose your course intersects the first quarter point to the right of N; your course then would be termed N¼E. Suppose it intersects the second quarter point to the right of NNE; your course then would be NNE½E. Refer to the compass and mark that point (NNE½E) with your pencil. Now you will observe that NNE½E, and NE by N½N are the same. To avoid any chance of confusion arising from this, learn to name these fractional points *from* North and South, *toward* East and West, except when the divisions (fraction points) are adjacent to a cardinal or inter-cardinal point, when it is always referred to that point. Thus we have N½E; N by E½E; NNE½E; NE½N. etc., etc.

You will probably use these terms in speaking of various courses; in the navy, however, courses are given in a different way. Every circle, independent of size, is divided into 360 equal parts, called degrees. Navy practice is to count the degrees from North by way of East and South around to North again and give the course in degrees. Thus an easterly course would be given as 90 degrees; a NW course as 315 degrees.

When I first became interested in motor boating, wishing to be as navy like as possible, I used degree courses. Quickly, however, I gave up the practice and used the other method, and for this reason: Suppose I was going from a place A to one we'll call B. I would lay down the course on the chart—suppose it was NE; the navy would give it as 45 degrees. That would be the direction, of course, *going to B*; *returning*, the course would be SW, or in navy terms, 225 degrees. I found it much easier to reverse by using names rather than degrees. In the first method, all that is necessary is to take the name of the opposite point; when *going* to B, if the course is NE by N, *returning* it would be SW by S. In the second method I had to look at a table to determine the opposite direction.

To repeat what has been said before, study the compass points so you understand them thoroughly and well. It will make your whole study of navigation easier. One whose native language is English, does not understand Spanish, for example, so long as every word of the foreign language has to be translated. An American, for example, cannot claim a real understanding of Spanish until he thinks in that language. Likewise the skipper cannot claim a real understanding of the compass so long as he has to hunt for any given point.

Let us assume now that we understand the points of the compass; not parrot fashion but as we understand, say the multiplication table. Then we'll discuss the subject of compass errors. And in doing this, always think of yourself as standing in the center of the compass and looking out toward the circumference. In other words let this be your viewpoint: In front of you is North; make a quarter turn to the right and you face East; another quarter turn, and you face South. Don't lose that viewpoint—*of standing in the center of the compass and of looking out toward the rim.* Emphasis is placed upon it because it will help you later on to understand a point that otherwise might be confusing.

When we were youngsters, or at least when I was a youngster, I thought of the North Pole as a pole—much like a clothespole, sticking out of the earth away up North somewhere! Foolish, of course—but just think of it like that for a few minutes. And we'll call it a geographical pole; the pole at which all of the meridians, the lines of longitude, gather. Now think of another pole, some distance from the geographical pole—we'll call this second pole the magnetic pole.

A good many people thinking that a compass points to the geographic North Pole. It doesn't! It points to the magnetic North Pole. And for this reason: If two magnets are brought close enough together to exert a mutual influence, the poles that possess *like* magnetism will *repel* each

(*Continued on page* 360)

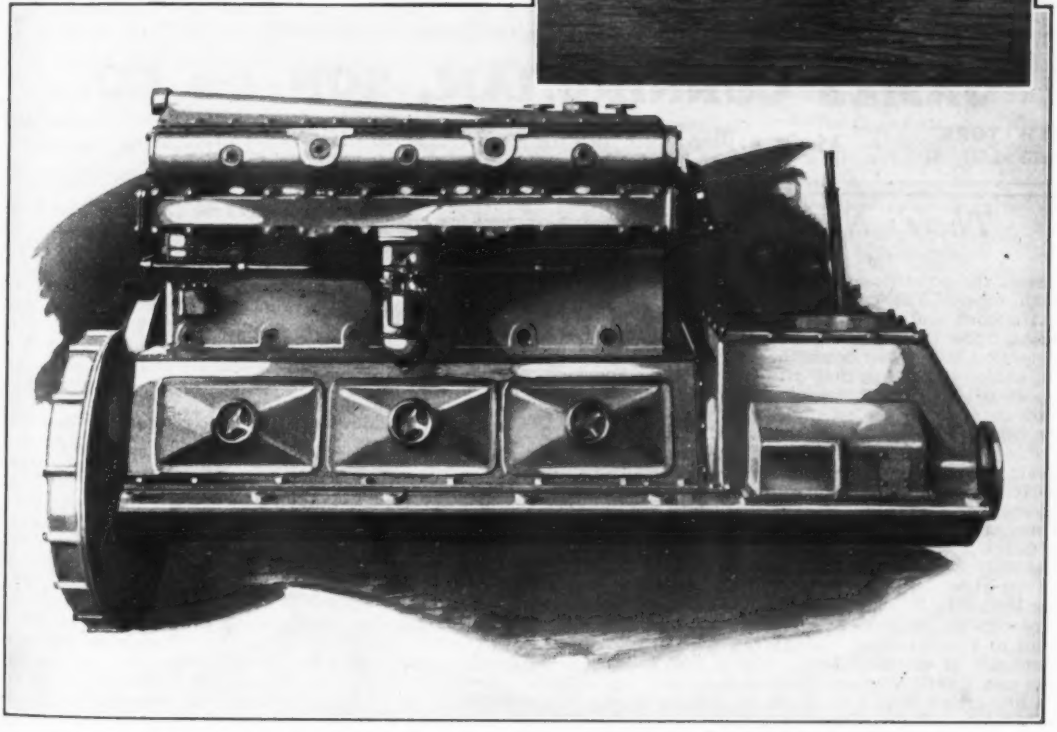
WINTON

ALSCOTIA

is powered with

WINTON GASOLINE ENGINES

DISCRIMINATING Yachtsmen prefer products that have proved their merit in *actual service*. That's why many of America's latest and finest pleasure craft have Winton Engines. The Houseboat Alscotia, designed and built by the Mathis Yacht Building Company, is one of the recent additions. This fine boat is powered with two Winton Gasoline Engines—Model 106, illustrated below.

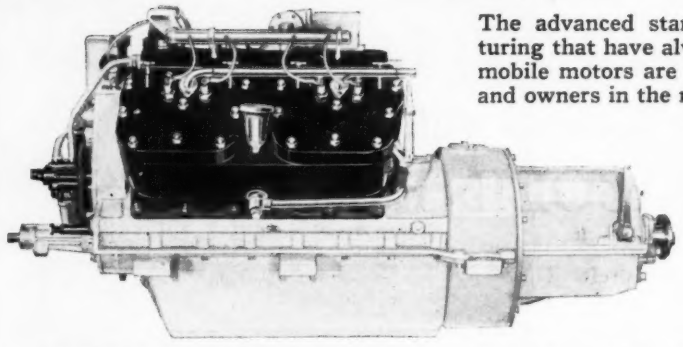


THE WINTON ENGINE COMPANY

CLEVELAND, OHIO, U. S. A.

New York—A. G. Griese, Inc., 331 Madison Ave.
Los Angeles—F. G. Bryant, 210 F. W. Braun Bldg.
Boston—Walter H. Moreton Corp., 780 Commonwealth Ave.
New Orleans, La.—Warren C. Graham Company, 411 Godchaux Building.
Seattle—H. W. Starrett, Sunset Engine Company
Washington—R. L. Fryer, 439 Transportation Bldg.
Cleveland—F. C. Erdman Co., Union Trust Bldg.

A New Cunningham Achievement!



The advanced standards of engineering and manufacturing that have always characterized Cunningham automobile motors are now available to motor boat builders and owners in the new

Cunningham
Inherently Balanced Marine Motor

CONDENSED SPECIFICATIONS

Eight cylinder "V" type. 90° cylinders. 90° crankshaft. 3¾" in bore, 5" stroke. Total piston displacement, 442 cu. in. Short three bearing crankshaft balanced dynamically and statically. I-beam machined connecting rods. Light weight iron pistons. Five bearing camshaft. Sil-Chrome valves.. Aluminum alloy crank case. Geared bronze water pump.. Pressure feed oiling with geared oil pump. Delco starting and ignition system. Special Cunningham-Stromberg Carburetor. Develops 100 H.P. at 2000 R.P.M. Weight, with reverse gear, 1050 lbs. Complete accessories.

An eight cylinder "V" type engine with cylinders set at 90° and fitted with a 90° crank shaft giving complete freedom from vibration at all speeds.

The ideal power plant for high speed runabouts combining light weight, compactness, low center of gravity and great horsepower per unit of space. Runs quietly and smoothly under all operating conditions.

Complete specifications and prices upon application to our nearest office.

JAMES CUNNINGHAM, SON AND CO.

NEW YORK
PITTSBURGH
Main Office and Factory ROCHESTER, N. Y.
CHICAGO
BOSTON

There's Nothing to It

(*Continued from page* 358)

other, while the poles possessing *unlike* magnetism will *attract* each other. The earth can be regarded as a huge spherical magnet and the magnetic poles as poles of unlike magnetism. The north-seeking end of the compass needle is of opposite magnetism from the magnetic North Pole; being of unlike magnetism they attract each other and your compass points North—to the magnetic North Pole.

But understand that the magnetic North Pole is at some distance from the geographic North Pole. Our illustration shows the relation between the magnetic north and the geographic north poles. The boat at A would be affected by a westerly variation. The one shown at B would also be affected by a westerly variation, but to a lesser extent. The one shown at C would have no variation whatever, since it is in a direct line with the magnetic and geographic poles. The boat at D, on the other hand, would be influenced by an easterly variation. An interesting condition arises in that the boat shown at E, while actually headed north would be doing so with its compass pointing south, which would be equivalent to a variation of 180 degrees.

The amount of variation is constant in one locality, but varies as one travels any considerable distance. At certain places a line drawn from you to the geographic North Pole would pass over the magnetic North Pole. In such a case there is no variation of course.

In New York Harbor the variation is ten degrees (approximately) westerly. This summer we cruised from Chicago to the Straits of Mackinac. The variation was practically nil. Apparently Chicago is in a straight line with the magnetic North Pole and the geographic North Pole. A boat in the Pacific Ocean, just off San Francisco for example, would have an easterly variation.

On all charts of the coast and of large lakes and rivers there are printed one or more compass diagrams called compass roses. These consist of an inner and outer circle of marks. The outer one represents a compass card marked in degrees or by the navy method and the North point is placed at the true or geographic north. The inner one is marked in points and quarter points and the North point is placed pointing toward the magnetic north or the pole to which the needle is attracted. Inside of the inner circle is a curved line of type that gives the exact variation in degrees and minutes for the year named and the annual change of variation. For example the variation on a chart is given as "11° 25′ W in 1922. Annual increase 4 minutes." This means that in 1922 the variation was 11° 25′ and the inner circle of marks was printed to indicate such variation; moreover, owing to the very slow change of the position of the magnetic pole this variation is increasing 4 minutes every year. If the motor boatman uses a chart of recent date, however, this annual change of variation can be disregarded, because it is very slight, and the variation can be taken as printed. Let us now consider a practical example of how variation effects the courses to be steered.

Suppose you were at Huntington Bay on the North Shore of Long Island, and you wished to cross the Sound to South Norwalk, Conn. You would find, from your chart, that the correct (true) direction is North. If you were to disregard the variation as given by the compass rose, you would land at some point west of South Norwalk—because the N on your compass, points to the magnetic North rather than the geographic North.

You know that the variation is 11° 25′ or (as also shown by the compass rose) one point. Then you have one point westerly error for, and here is the rule, *"When the effect of a compass error is to draw the north end of the compass needle to the right, or eastward, the error is named east or is marked +; when the effect is to draw the north end of the needle to the left, or westward, the error is named west, or marked —."*

In this case the magnetic North Pole draws the point of your compass away from the geographic North Pole one point to the westward or left, resulting in an error of one point westerly. When your compass, therefore, indicates N by E it is equivalent to a *correct* bearing of North, or one point to the *left*. From this we have one more rule which is: *"When the error is left or westerly, the correct direction is to the left by the amount of the error; when the error is right or easterly, the correct direction is to the right by the amount of the error.* Simplified, this rule can be easily remembered, as When the *correct* direction is to the *right*, the error is *east*. In other words, just remember the words, correct—right—east.

(*Continued on page* 362)

Advertising Index will be found on page 384

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There's Nothing to It

(*Continued from page 360*)

At the risk of unnecessary repetition I am going to repeat this in another way: We want to go from Huntington Bay to South Norwalk. We know that the correct direction is North; but a compass error pulls the needle of the compass one point to the left, giving us one point westerly error; then how will we steer our boat? We remember the words correct—right—east. We change them to suit the particular case—correct—left—west. The error is one point westerly; the correct direction, therefore is one point to the *left*. We head the boat so our correct direction (north) is one point to the left; and our compass reads N by E, which is the course we'll steer.

But suppose we wanted to cruise from a place A to another B—with the geographic (true) direction South. How would we steer the boat? Here is where you want to remember that whenever you consider compass errors you are to picture yourself as standing in the center of the compass and looking out toward the rim.

We want to go to B, south of A. Variation is one point westerly. How do we steer? S by E? No! We steer S by w. *Correct—left—west.* Our correct direction is one point to the left. We head the boat so this correct direction (South) is one point to the left, our compass reads S by W, and that is our course.

Confusion often arises on this southerly heading because the beginner fails to regard himself as standing in the center of the compass. He is likely, therefore, to apply the error to the wrong side.

Before considering the next paragraph be sure you understand how an error of variation is applied (corrected); because the compass has a second error and it is corrected in the same way—by the same rules. Work out for yourself different problems of variation, taking the headings from various parts of the compass card. If you want to cruise a *true* direction of East and the variation is one point easterly, how will the boat be steered? E by N. If the true direction is SW, variation one point easterly, how will she be steered?

We have seen that the first error of the compass is variation; the second is *deviation*. And deviation is caused by any iron or steel (or other metals) on the boat that influence the compass needle.

On our boat, Sea Drift, the steering wheel is on the starboard side; the compass is mounted right in front of it on the cabin roof. Directly under is the galley. The various pots and pans influence the compass. Every boat will have some errors of deviation.

And these errors are corrected just as is the error of variation. If the influence on the needle is to pull it to the right, the error is easterly; if to the left, the error is westerly.

The error of *variation* in a given locality is constant; by that I mean this: when you run from Huntington Bay to South Norwalk the true direction is North, error due to variation is one point westerly, course to be steered is N by E. Returning, the true direction is South, error of variation is the same, course to be steered is S by W.

With *deviation*, however, the amount of error may be one point on a northerly heading, one point and a quarter on a southerly heading, and half a point on a south-westerly heading. The amount of error of deviation varies all the way around the compass card.

The amount of *variation* is determined by the compass rose on the chart the amount of *deviation* is determined by a process termed swinging ship.

And swinging ship can be explained as follows: When all of your stuff is on board; when all the galley pots and pans are placed in position; when engine tools are in place; when the boat is equipped just as it would be for a cruise, run the boat between given points, the true or geographic direction of which is determined from a chart.

The direction between a church steeple on shore and a lighthouse is north and south. Get your boat right in line with these objects. Your compass ought to read (making allowance for variation) North, if running toward the lighthouse. If it doesn't, some metal on the boat is influencing the compass needle—and the difference is the error. Make a note of it. Then turn around and get the error on a southerly heading; then on an easterly heading, on a westerly heading, etc., etc. Make as many readings as possible; that is, head the boat in as many directions as possible. You will have, when done, what is termed a Deviation Table.

There are other methods to determine deviation; as for

(*Continued on page 364*)

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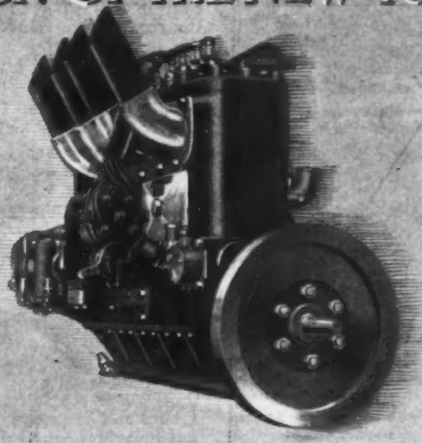

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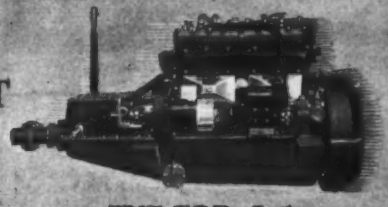

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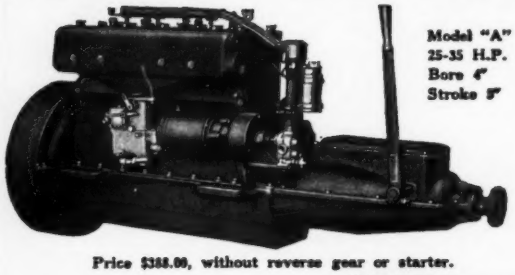

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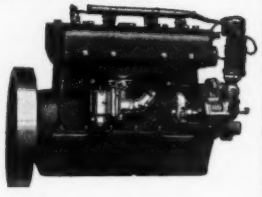

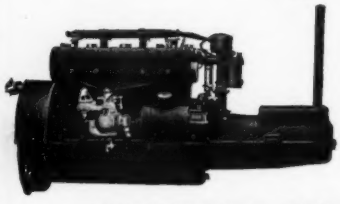

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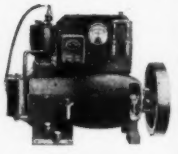

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Chicago, Ill.

There's Nothing to It

(*Continued from page 362*)

example, by taking observations from the sun—but these are not for the motorist who is experimenting with his first boat.

Now on this whole question of deviation, let me give you a bit of advice from my own experience. It is possible to have your compass compensated so that you do not have to bother with deviation errors; and I think this far better than having to bother with a deviation table.

Before ever I stepped on board of my first boat I read much about deviation and deviation tables. One writer said that it was easier to have a deviation table than to have the compass corrected. I believed him. As a matter of fact, the idea of having a deviation table rather pleased me; it made me feel as if I were a regular navigator.

So I had a nice little table worked out for me by the people from whom I purchased the boat. I was proud of that table. It looked quite business-like.

The second day I had the boat, a representative of the company came on board to give me a few pointers on boat handling. We were running from Oyster Bay to Manhasset Bay. When we were part way we ran into a nice thick fog. He was at the wheel. After about five minutes, he asked me for the deviation table. Proudly and quite nonchalantly, I handed it to him. We were headed for Manhasset Bay. About twenty minutes later I noticed that he looked quite worried. Manhasset Bay was not showing up where it should be. He kept going. Suddenly we came upon two spar buoys, one red, the other black. A study of the chart showed us that we were away off the course; that we had gone northwest when we should have gone southwest; that we were wandering around somewhere between Hart Island and Hunter's Island when we should have been heading into Manhasset Bay. He, an experienced boatman, had applied the error of deviation incorrectly.

My advice to you is just the opposite from the advice given to me: It is easier to have the compas compensated than it is to apply the error. The amateur skipper caught in a fog for the first time is going to be a bit nervous. The gray blanket of mist enfolds him completely. He can't see three hundred feet around him. Just before the fog settled he passed a certain lighthouse on his left. Now, in the fog, he hears the fog horn of the lighthouse and it seems to come from the right; now from astern, now from forward. He wonders if by chance he has turned the boat around. Before running into the fog he had been steering by land marks. Now he looks at his compass. He knows that the true direction is SSE ¼ S. He remembers his deviation table, gets it out and observes that on a southeast heading he has an error of two points easterly. His compass shows he is running SE by E. While he is trying to figure out the course to be steered, he hears the fog horn and now it comes from the right and ahead, just as sure as shootin'. Something has gone wrong with the compass—or at least, that is his conclusion.

Now isn't it better if the chart shows the true course to be SSE ¼ E to be able to put the compass there and to know positively that you are going in the right direction? I believe it is.

The manufacturer from whom you purchased your compass will, for a moderate sum, swing ship for you, or better yet, obtain the deviation errors from observations of the sun, and then correct your compass by placing compensating magnets about it. Then you can forget all about a deviation table.

In my opinion, and based on my very limited experience, a complicated deviation table is not only unnecessary but confusing. And permit me to quote from Bowditch, the standard work on Navigation (page 55): "There is no excuse for large deviations in a standard or steering compass and they should not be allowed to exist."

To sum up on this question of compass and compass error: First get a good compass; do not attempt to save a few dollars on this important instrument. Familiarize yourself with the points of the compass so that you do not have to look at a compass card to know that the points adjacent to SW are SW by W and SW by S. Understand the why of the error of variation and how to correct it; understand the errors of deviation. Remember when you are considering compass errors that you are to picture yourself as standing in the center of the compass, looking out toward the rim. And consider carefully the advantages of having your compass compensated. For, with the deviation table eliminated, the error of variation need given you no concern—as we shall see in the chapters on Navigation.

(*To be continued*)

Advertising Index will be found on page 384

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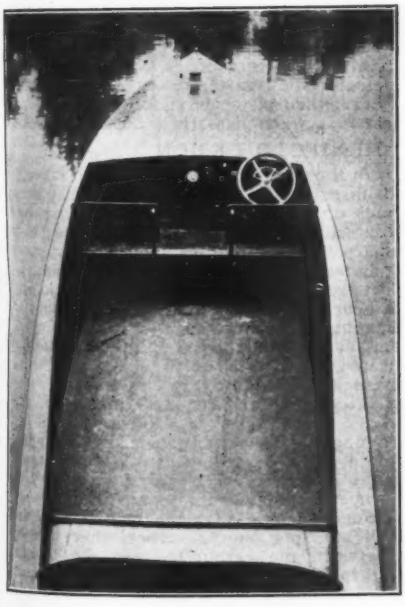
32 ft Runabout



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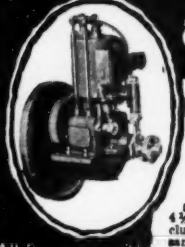

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Increasing the Engine Power

(*Continued from page 88*)

For example, take a flywheel that is 360 inches in circumference; divide it by 360, which makes one inch represent one degree; we find that we want to time a valve to open at 10 degrees after top centre; we turn the flywheel until the mark shows that the piston is at top centre in the cylinder we are timing; we measure and mark off a spot 10 inches in the opposite direction from which the flywheel turns from the top centre mark; we move the flywheel in the direction it should turn until this mark comes opposite the top centre mark on the cylinder casting; and then we loosen the cam shaft gear and turn it until the designated valve is just starting to open or lift from its seat. Set each valve in each cylinder so that it opens or closes exactly at the same position of the crankshaft as it is in any other cylinder. Always start in with the cylinder next to the flywheel setting the intake valve, go on the next cylinder and set the intake valve, and so on until all the intake valves are set; then, start in with number one cylinder to set the exhaust valves and continue on in turn until they are all set correctly. When changing the timing in this manner, it is necessary to have separate cams, so that they can be turned around until they are in the correct position. They should preferably be keyed to the shaft and locked with a set screw or a tapered pin. Using the taped pin only is a very weak method, and invariably results in the cams working loose sooner or later, generally at a bad time.

The following table, however, will give a general idea of workable timing schedules:—

Rev.	In. open	In. close	Ex. open	Ex. close
350- 400	10 degrees a. t. c.	10 degrees a. b. c.	15-20 degrees b. b. c.	Top center
450- 550	10 degrees a. t. c.	15-20 degrees a. b. c.	20-25 degrees b. b. c.	5 degrees a. t. c.
600- 750	10 degrees a. t. c.	20 degrees a. b. c.	30 degrees b. b. c.	5 degrees a. t. c.
750-1000	7 degrees a. t. c.	20-25 degrees a. b. c.	35-40 degrees b. b. c.	5-10 degrees a. t. c.
1000-1500	5 degrees a. t. c.	25-30 degrees a. b. c.	40-45 degrees b. b. c.	10 degrees a. t. c.

a.t.c.....after top center
a.b.c.....after bottom center
b.b.c.....before bottom center
Top centre....when piston is at top of stroke
Bottom center....when piston is at bottom of stroke.

MANIFOLD DESIGN

Let us start in with the intake manifold first, as it is really the most important in regard to power increases. You must make up your minds on either one of the following points and choose for yourself. Some designers claim the bends should be made sharp in order to give the incoming gases a sort of whirling agitated motion, which reduces condensation and gives a better mixutre to the cylinder. Personally I believe this is a benefit, provided there is no hot spot or other method of heating the mixture on its way to the cylinders. Others claim that with methods employed so that the mixture can be heated, it is better to use long easy bends and increase the velocity of the mixture entering the cylinders. One thing is certain, however, and that is, if the mixture is heated too much, there is a preceptible power loss, and the incoming gas is already partially expanded, and on being compressed and fired, part of the expansion from which the power is derived has already been lost. Unless you want to experiment in order to see which is the more efficient, I would suggest that the manifold be designed with a small hot spot on the vertical riser pipe of the manifold in between the carbureter and the branch where the pipes lead to the various cylinders, with the bends fairly easy curves, and every part of it designed and made so that any condensation of gasoline will drain back to the carbureter, without collecting in any low spots to foul the incoming mixture. Another point to be remembered, is that the size of the manifold must be comparable to the speed of the motor and the size of the combustion chamber to be filled. If it is too large, the mixture coming into the cylinders will be streaky or erratic, while if it is too small the cylinders will not be completely filled; either method meaning power losses. The size of the carbureter must also be taken into consideration. Each cylinder should have its individual lead from the riser pipe of approximately the same length, so that every cylinder will get the same amount of gasoline and air. If one is long, while another is short, the short one will get the better mixture, or vice versa, according to the carbureter setting. This will rob the motor of horsepower and set up more or less vibration. On many of the high speed multi-cylinder type of motors, the intake

(*Continued on page 370*)

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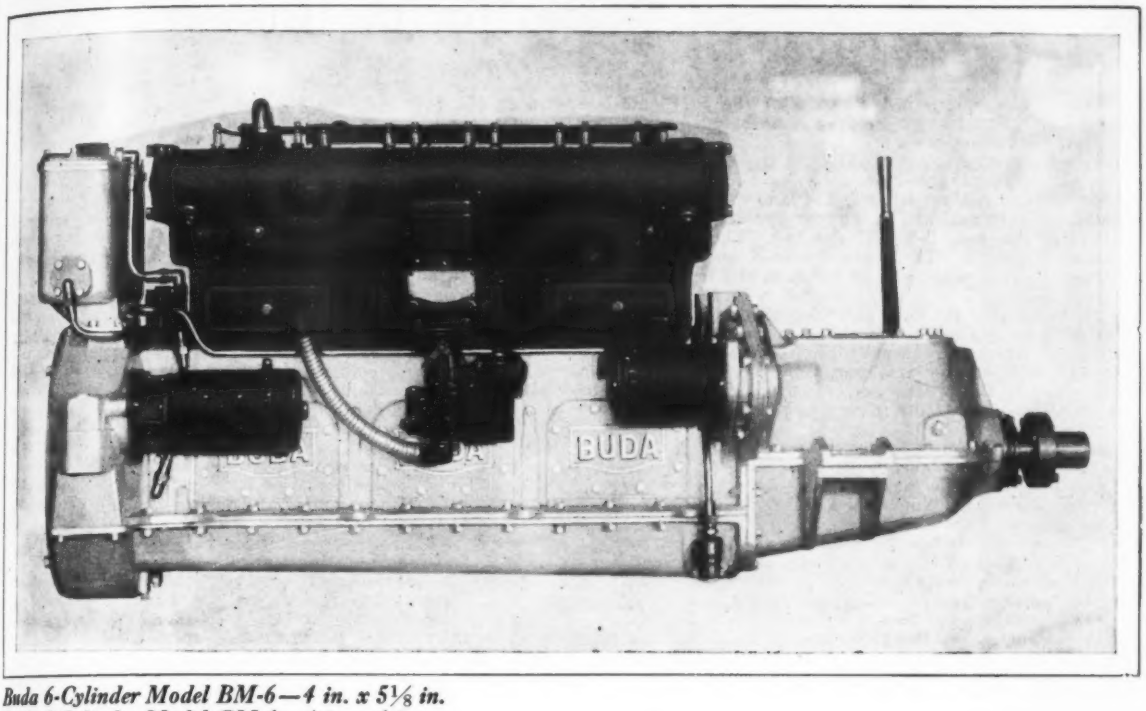

Buda 6-Cylinder Model BM-6—4 in. x 5⅛ in.
Buda 6-Cylinder Model GM-6—4 in. x 6 in.

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ESTABLISHED 1881

BUDA
The
ENGINE

A Compact Radio for the Cruiser

(*Continued from page* 80)

frequency transformers just forward of the first and last tubes. These transformers are the smallest ones made and will probably have to be used, for no others can be put in this location without overcrowding. The list of materials carries full information on them.

The two variable condensers, C-1 and C-2 are mounted vertically on the panel and to the rear end of each is secured the inductances, L-1, L-2, L-3 and L-4. These are clearly shown in Figure 2. These are mounted by securing two small wooden, *not metal,* pins to the ends of a length of fibre or composition. These pins are shoved in through the openings of the edge of the coils and then, through another hole in the fibre strip, a machine screw is turned into one of the small holes which may usually be found on the backs of variable condensers for this purpose. Notice in both the drawing and in the photos how these are mounted so that they are away clear of the tubes and the rest of the instruments.

The rheostat is mounted directly in the center of the panel and slightly below the level of the two tuning dials. Directly below this we have the jack into which the loud-speaker or head-phones may be plugged. The binding posts for the aerial and ground are located on the right hand side of this panel and the battery binding posts on the left.

Now refer again to Figure 1. The aerial and ground connections are made to the two ends of the primary coil, L-1, while the secondary, L-2 is first connected to the variable condenser as shown and then, the end furthest away from the variable condenser, to the G or grid post of the first tube while the other side of this coil is connected to the G post on the secondary of the first audio transformer. The curved line in C-1 and C-2 represents the rotary plates of the variable condensers and should be connected to the side of the circuit shown, otherwise the set may change tune every time you put your hand near it.

The P or plate post of the first tube, A-1, is then connected to the end of the second primary coil, L-3, thence through the primary of the second audio transformer and to the high voltage side of the B battery. The secondary of the second radio frequency transformer, L-4, is tuned exactly like the first one with the second .00035 microfarad variable condenser C-2. The upper end of this goes to the grid-leak and condenser and thence to the G post on the second tube which is the detector. The grid-leak, R-1, is usually of about 4 megohms while the grid-condenser, C-3, is .00025 microfarad capacity. The lower end of the coil L-4 is connected to the positive leg of the filament wiring as shown.

Since we are dealing with a reflex set, after the signal has passed through this detector tube, it is again fed back to the first one, A-1, from the P of D to the P of the primary of the first audio transformer. The other side of this primary, of course, is connected to the low voltage side of the battery. Notice also that the other side of the secondary of this same transformer is connected to the negative side of the A battery, marked minus F.

The last tube in the circuit, A-2, is simply a one stage audio amplifier and is the conventional circuit. The secondary of the second audio transformer is connected, one side to the G post of this third tube and the other to the negative side of the A battery, —F. The output side of this tube at the P is directly connected to the single circuit jack and thence to the high voltage side of the B battery again.

The filament or A battery wiring is almost too simple to take up in detail. Starting at the right hand side of diagram 1 we find that the A— post is first connected to a six ohm rheostat, marked R-2, and thence to the —F posts of each of the tubes. The plus F is simply a connection from each tube socket to the binding post marked A plus which is also the common terminal for the B negative. This completes the wiring of the set and the next step is the detail of construction of the inductances, L-1, L-2, L-3 and L-4.

Figures 3 and 4 have to do with the construction of these coils and you will also gain an idea of their construction from the photographs. In Figure 3 we have a diagrammatic sketch of how such coils are wound. On a block of wood, mark out a circle three inches in diameter and divide this off into fifteen even points with a pair of dividers. Drill a small hole for each one and insert a dowel about the size of a lead pencil and possibly two and a half inches long. Figure three shows how the coil winding is done. Number twenty-two double silk covered wire is used and is started by winding the end around one of the dowels as shown at the point marked start. From this point it goes outside of two dowels, inside of two more, outside of the next two and inside the next two and so on until the required number of turns are wound in place.

In this drawing the first complete circuit is shown by a full line, the second by a series of dashes and the third by a dot-dash line.

In the photographs you will notice that the centers of the coils are of a different shade. This is the primary and it means that when we have one-half of the secondary in place, we must wind the primary, and then finish up on the rest of the secondary. The total numbeer of turns on L-1 are sixteen, on L-2 fifty-six, on L-3 twenty-two and on L-4 fifty-six. Notice that there are more turns in the second primary, L-3 than there are in the first one L-1.

When the first coil, consisting of L-1 and L-2 is wound on the form, it is bound together with pieces of string run up and down through the openings alongside the dowels. When firmly bound together, it is removed from the dowels and should be self supporting. The second one, L-3 and L-4, is made in the same way.

In making the connections to this coil the only one which is at all critical is the one which connects to the G posts on A-1 and D from L-2 and L-3. These connections should be as short as possible and run from the side of the coil furthest away from the panel.

When the set is complete, first connect the aerial and ground binding posts and then the A battery wires to the proper binding posts. Place the tubes in the sockets and turn on the rheostat, R-2, to make sure that the tubes light up. Then connect the negative side of the B battery to the same post to which the A battery positive is wired and then when the two forty-five volt B batteries are wired together, positive to negative, run another wire to the B positive 90 volts post and to the last open binding post on the B batteries. The other B positive post may be connected to either the 22½ volt post or the 45 volt post on the B batteries.

Then plug in the head-set and slowly turn on the rheostat until the tubes give a slight hissing sound in the receivers. Adjust the tubes until just below the point where this hissing commences. Then tune the dials back and forth slowly, keeping them so that they are about in step. These should be set on the shafts of the condensers, C-1 and C-2, in such a way that when all of the rotary plates are in mesh, the dial reading should be 100.

You will find that if a station comes in at, say, 50 on the first dial, it will come in strongest when the second dial is set at about 49, 50 or 51 and in some cases the readings will be identical. Once you receive a station, jot down on a piece of paper the numerals at which you heard it and if that station is broadcasting again, you may tune back to it again and again. The final adjustments are made with the rheostat and by either turning it up or down you may increase or decrease the volume. You should get sufficient volume for a loud speaker on powerful broadcast stations within thirty or forty miles.

The necessary parts are listed as follows:

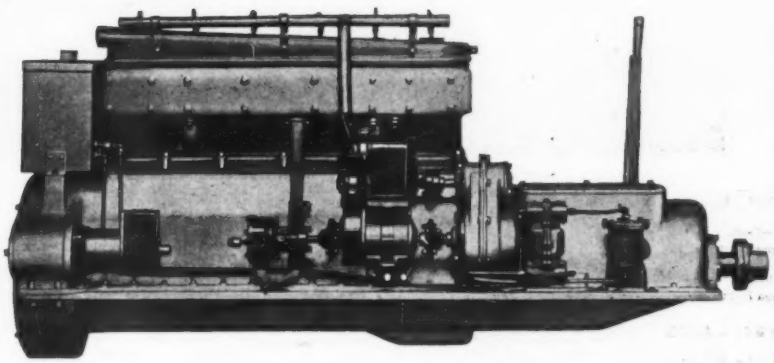
Two sets or inductances as outlined, L-1, L-2, L-3 and L-4.
Two low ratio audio transformers, (4-1 Hedgehogs).
Two .00035 microfarad variable condensers C-1, C-2. (Na-Ald Cogswell).
Three gang tube socket, (Fada).
One six ohm rheostat, R-2. (any good make).
One grid condenser C-3, .00025 mfd. (Dubilier).
One 2 or 4 megohm grid-leak R-1. (Daven).
One single circuit jack, (Frost).
Six binding posts, (Eby).
Two three-inch dials for tuning, (Na-Ald).
One seven by twelve bakelite panel with sub-base of pine or bakelite.

Wire for wiring set, (flexible rubber covered), Cabinet, A and B batteries, three tubes, aerial and ground equipment, plug, head-phones and loud-speaker.

The particular makes mentioned in this list are the ones used by the writer in making the set shown. They may not necessarily be the best for the purpose, but they are known to be suitable.

For next month Mr. Crosby has prepared an interesting article on the installation of aerial equipment with a number of original thoughts on tackle for the masts.

6 cyl.
50-90 H.P.



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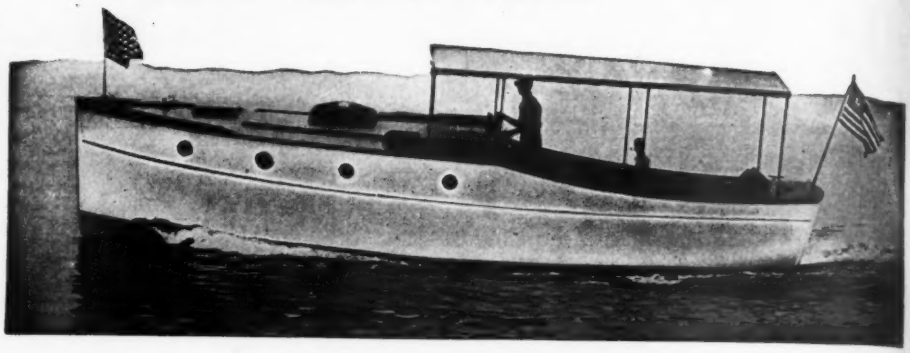

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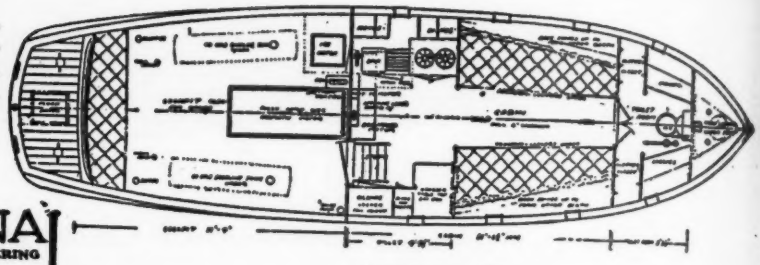

Arrangement Plan

INTERNATIONAL
SHIPBUILDING AND MARINE ENGINEERING CORPORATION
NYACK, NEW YORK, U.S.A.

Increasing the Engine Power

(*Continued from page 366*)

manifolds are not all in one casting, rather two or three manifolds and carbureters are used, so that each cylinder will get as good a mixture as possible, and as promptly as possible. Take a six or eight cylinder vertical type engine for instance, and you can readily see that in attempting to design a manifold which would give an equal feed to each cylinder, the pipes leading from the vertical riser to the intake valves would have to be extra long. Every inch of manifold is just that much more surface to act as a drag on the incoming gases and cause condensation. Whatever type of manifold is used for the intake, be sure and have the inside surface as smooth as possible, particularly at the bends. For that reason, it is best to use tubing ihstead of pipe, with all joints carefully cut and brazed, rather than using pipe fitting. Relative to the thought of draining the condensed gasoline back to the carbureter, there is one place which is often the source of much trouble, and entirely missed when the operator starts hunting the source of the trouble. That is the pocket, or chamber, immediately under the intake valve, into which the incoming gases rush after leaving the manifold where it bolts up against the cylinder casting. Oftentimes this pocket is very rough inside, with the bottom lower than the under side of the intake manifold. You can readily see that this would very easily act as a sort of reservoir for condensed gases to collect in. Some may think that there is enough heat to evaporate this gasoline, but such is not the case, unless the sides of this pocket are not waterjacketed, which is seldom found even in the older motors. I have found this trouble in a number of engines, and as soon as it was eliminated, they developed more power, quicker acceleration and smoother running, particularly at low speeds. The best method of doing this little trick, is to first smooth out the entire inside of this chamber with a small cold chisel and file, clean out thoroughly, bore three or four holes in the bottom of the casting (about ⅛ inch deep and at an angle from the vertical), tilt the motor slightly in the opposite direction from the side the intake valves are on, and pour in sufficient molten babbitt until it is as high as the bottom of the inside of the intake manifold. This will cause all the condensed gas to drain on back into the manifold. There is not enough heat here to melt the babbitt, therefore it is a lasting job. A very simple method of making a hot-spot for the intake manifold is as follows:—Thread the vertical riser up as far as you wish the top of this hot-spot to be, take two pipe caps of one inch larger size than that of the riser, bore them out and tap so that they will screw on the riser thread, screw one up to the top of the thread on the riser, cut a piece of tubing to the proper length for the body of the hot-spot, thread it top and bottom, screw it into the other pipe cap, screw this pipe cap on the riser so that the unoccupied threaded end will screw up into the pipe cap at the top of the threaded portion of the riser, screw up tight, drill and tap two holes into the side of this hot-spot, near the bottom and on opposite sides, drill and tap a hole into the exhaust pipe or manifold (these holes should be about ¼ inch pipe size), run a pipe from the exhaust to one hole in the hot-spot and another pipe from the other hole out through the side of the boat. This will cause a fairly good quality of hot exhaust gases to pass through this chamber around the riser of the intake manifold, and the threaded portion inside the hot-spot will cause the heat to be radiated on the inside of the riser, which will slightly heat and gasify the incoming mixtures as they pass. Passing the heated overflow water from the jackets through this hot-spot is not nearly as efficient as the exhaust gases, as there is not sufficient heat to do any real good. Intake manifold gaskets made up with a layer of closely woven copper gauze covering the hole, aids a great deal in breaking up the mixture and not allowing raw gasoline to enter the cylinders, however it is only practical on slow and medium speed motors, while this copper gauze should be dome or funnel shaped over the hole, so that there is sufficient area to allow enough mixture to get into the cylinders. On high speed motors it will rob cylinders slightly and cause slight power losses. When you find that it is possible to get better results by drilling air holes and placing cocks in them, which are opened as soon as the

(*Continued on page 372*)

Advertising Index will be found on page 384

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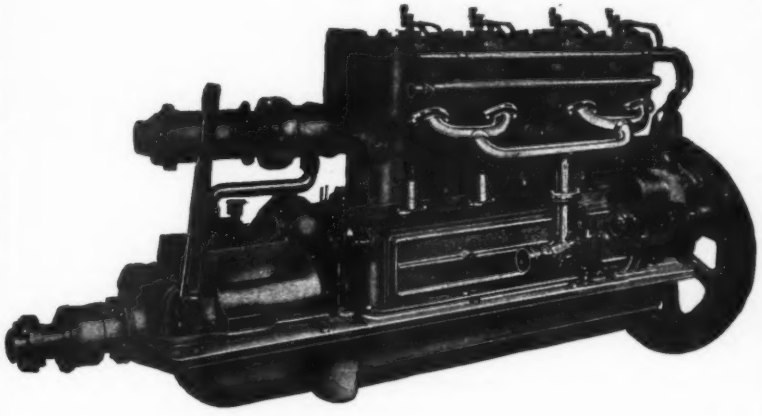

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Hill Diesel Engine Co.
R. E. OLDS, Chairman
Lansing, Mich.
Cable—BEMCO

Increasing the Engine Power

(*Continued from page 370*)

motor is running, then look for trouble due to improper carburetion or improper manifold design. If such devices were the source of more power in themselves, the manufacturers would make their manifolds with these cocks on them. They are only makeshift devices to overcome existing faults, and the best method is to find the fault and rectify it rather than to attempt to get the required results by the use of such devices.

Exhaust manifolds are supposed to be so shaped and built that they will carry off the burnt gases from the cylinders immediately after the power strokes are completed, without causing any back-pressure on any of the cylinders. Back-pressure is a loss of power, as it will keep a certain portion of the burnt gases in the cylinders, and this will foul the incoming gas and cause power losses through weak explosions. Therefore in designing or building such a manifold, it is important that each cylinder have as long an individual exhaust lead running from the chambers under the valve to the body of the manifold itself as possible. In many of the racing motors where stacks are used, each cylinder has its own manifold or pipe leading from the exhaust valve to the open air. By this method, back-pressure is eliminated, and power gains are noticeable. These exhaust leads should rake aft about a 45 degree angle, so that when the exhaust gases are exploded into the body of the manifold, they are forced aft and out of it into the exhaust pipe and thence overboard. The body of the manifold should be as large as practical, at least one half the cylinder bore for motors up to four cylinders in the slow and medium duty class, while in motors with more cylinders or of higher speed, the size should be increased as much as possible. This portion of the manifold should be waterjacketed so that it does not become unpleasantly hot. Unless you are able to make a pattern so that a casting can be made for a manifold of this sort, it is best to go to some shop where they can do this work and have the job completed for you. Make up a sketch of just what you desire, give them careful measurements, and you will get a good job. There are a number of firms who specialize in this work, and who guarantee their products. If possible, it is wise to place the expansion chamber or muffler as close to the exhaust manifold as possible, as this aids in expanding the gases and reducing the consequent back-pressure. The exhaust line should be of ample size, with all bends long and easy. Try to eliminate low spots or traps anywhere in the line. A small amount of the overflow water from the jackets can be piped into the exhaust line at some spot where it is at least four or five inches lower than the bottom of the exhaust manifold. Only use enough water so that the exhaust line is kept cool enough that it will not cause fire or too much heat in the engine room or cabin. Using too much water also causes back-pressure, particularly where there are low spots for the water to trap in, and back pressure is the thing we are trying to eliminate as much as possible.

WEIGHT OF MOVING PARTS

Where the moving parts of any piece of machinery are heavy, it takes power to move and stop them, sets up a great deal of vibrations, causes excessive wear and thus results in an immense power loss. Of course, there is a point of safety which must be considered in arriving at the proper weights; therefore, unless you are able to solve this problem yourself, it is best to make a comparison with some other motor which is comparable to your own, or take the problem to someone who can advise you correctly. Don't guess or a ruined motor may be the ultimate result. Flywheel, pistons, crankshaft and connecting rods are the vital parts which are to be considered. The flywheel on single or double cylinder heavy duty motors must be excessively heavy in order to absorb vibration and carry the motor over on its idle or exhaust strokes. As the number of cylinders increase, the weight of the flywheel decreases, owing to the fact that there is not as much vibration and more power impulses. Very high speed motors have hardly any flywheel at all, some have only sort of counterbalances on the crankshaft to give the required turning effort. This part of the motor can be readily compared with one on some other successful engine. Pistons are where excessive weight means the most power loss, as they alternately rise and fall. As it takes power to start them on the upward stroke as well as on the downward stroke, and owing to the fact that there is a reversal of the movement at each of these points, it is possible for an enormous amount of power to be lost when the weight to be moved is excessive. Many of the

(*Continued on page 374*)

Advertising Index will be found on page 384

A Perfect Record For Reliability

New York, Gold Cup Regatta, August, 1925.
Winner: Baby Bootlegger; owned by Caleb Bragg; powered with a Packard Marine Motor, equipped with AUTOPULSE System of Fuel Supply —a perfect record.

Detroit, Mich., 150 Mile Sweepstakes, September 7, 1925.
Winner: Packard-Chriscraft; owned and driven by Col. J. G. Vincent, V. P. Packard Motor Car Co.; powered with a Packard Marine Motor—55.85 M.P.H.—A signal victory and a great achievement for the AUTOPULSE System of Fuel Supply.

Indianapolis, Classic, 500 Miles, May 31, 1925.
Ralph DePalma, Miller Special; equipped with AUTOPULSE System of Fuel Supply.

Altoona, Pa., Auto Races, June 13, 1925.
Milton, McDonough, Duray and Wonderlich all used the AUTOPULSE System of Fuel Supply most successfully.

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Denver, Colo., Auto Classic.
DePalma, Duryea, Hart and Shattauch again demonstrate and prove the reliability of the AUTOPULSE System of Fuel Supply.

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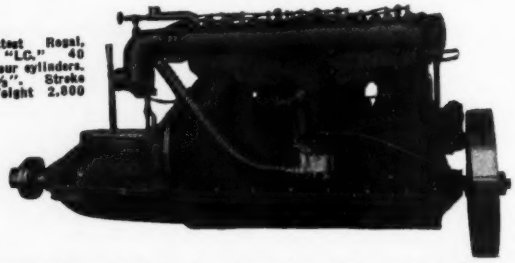

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Increasing the Engine Power

(*Continued from page 372*)

high speed engines are equipped with pistons made either of an aluminum alloy or of a very light grade of cast iron, and these pistons weigh only about one third as much as the old style cast iron parts. They are designed for strength, correct expansion, heat conductivity and light weight. Performances have shown them to be almost perfect, and the use of these light parts is increasing daily. There are a number of manufacturers who keep replacement parts for most makes of motors, or they will make them for your motor at a very reasonable cost. Their use is not advised, however, for the low speed engines, and the explosion stresses are too much for them. Using four light piston rings in the place of three heavy ones, has been found to give a better seal to the cylinders, and eliminate a great deal of friction and wear on the cylinder walls, as these lighter rings do not have near as much tension as the heavier ones, and the oil film on the cylinder walls is not so apt to be broken down. In most cases the lower ring is a sort of oil scraping ring which aids in preventing the oil working up into the combustion chamber and fouling the mixture. Connecting rods are invariably drop-forgings, and rarely are they too heavy. If you have one of the old style engines, however, it must pay you to look and see if they are made of the correct material and of the right weight. Where crankshafts are too light, they have a tendency to whip, wear the bearings and set up friction, which is another power loss.

CARBURETION

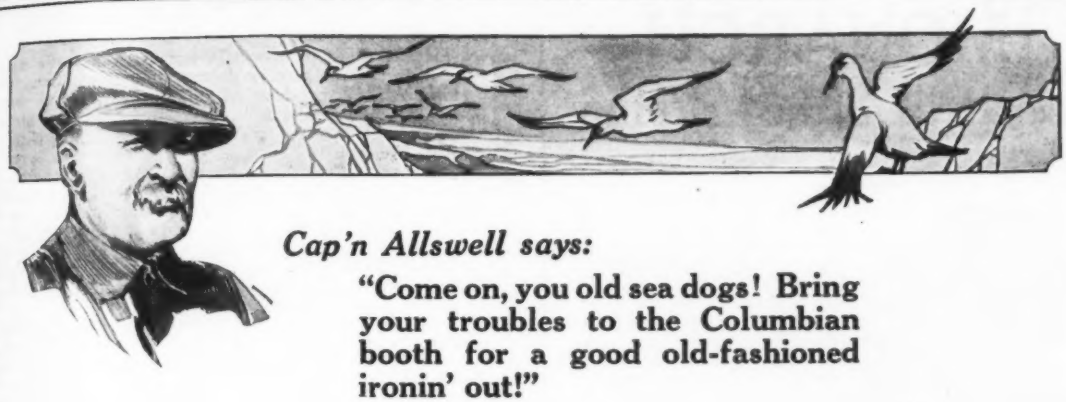
Correct mixing of the gasoline and air is really one of the most important factors in getting efficiency out of any internal combustion engine. Fifteen parts of air to one part of gasoline is the theoretically perfect mixture, but it has been found that all engines will not operate on the same mixture. In fact, there are seldom two cylinders, even on the same motor, which will run identically the same on the same carbureter setting. Also, one motor may work perfectly with some certain carbureter and give very poor results on some other. In other words, if you are having trouble in getting good carburetion, try out one or several other carbureters and you may be surprised at the result. I have seen motors whose power performance was increased as much as 20 per cent by such a change. Most carbureters today have both a high-speed and low-speed setting. These should be made with the motor good and warm, particularly the high speed setting, as too much gasoline in the mixture causes the motor to act and run very sluggish. It is also a good stunt to dismantle the carbureter about twice a season and dry out or drain out the float. Repair or shellac it before replacing, and set it at the proper level (as given by the manufacturer) when the little intake valve is seated.

One other thing which may cause trouble is spark plug location. In T head motors particularly, where the spark plug is directly over the intake valve, the power output is a little low, as it takes time for the spark located on the extreme side of the combustion chamber to fire the compressed mixture over to the other side. In order to get away from this fault, it is possible to use a dual ignition system, with a spark plug over the intake as well as the exhaust valve. With these two plugs firing simultaneously, the firing of the compression charge takes only about one-half the time and gives much better power performances. If only one system is desirable, however, locate the plug directly over the center of the piston, which accomplishes about the same results. Make sure that your entire ignition assembly is in perfect working order, otherwise, you will not get the results you should, even though everything else is in perfect shape. About 90 per cent of all motor troubles are due to improper ignition or carburetion.

In starting a job of this sort, locate as many faults causing power losses as possible before making changes; try and find out if the change you intend making is feasible; then go ahead and do your durndest. One thing to remember is this; even though you may not get all the power you expect, it is almost certain that you will get more than formerly; but the best part of it is that you will get a mechanical education on your own motor which is priceless, and which will save you money in the future. Knowing your power plant, inside and out, will cause you to pay more attention to its operation and upkeep; consequently, it will give you better results, prove more reliable, cost less to operate and repair, and you will have more confidence in it as well as in yourself when emergencies arise.

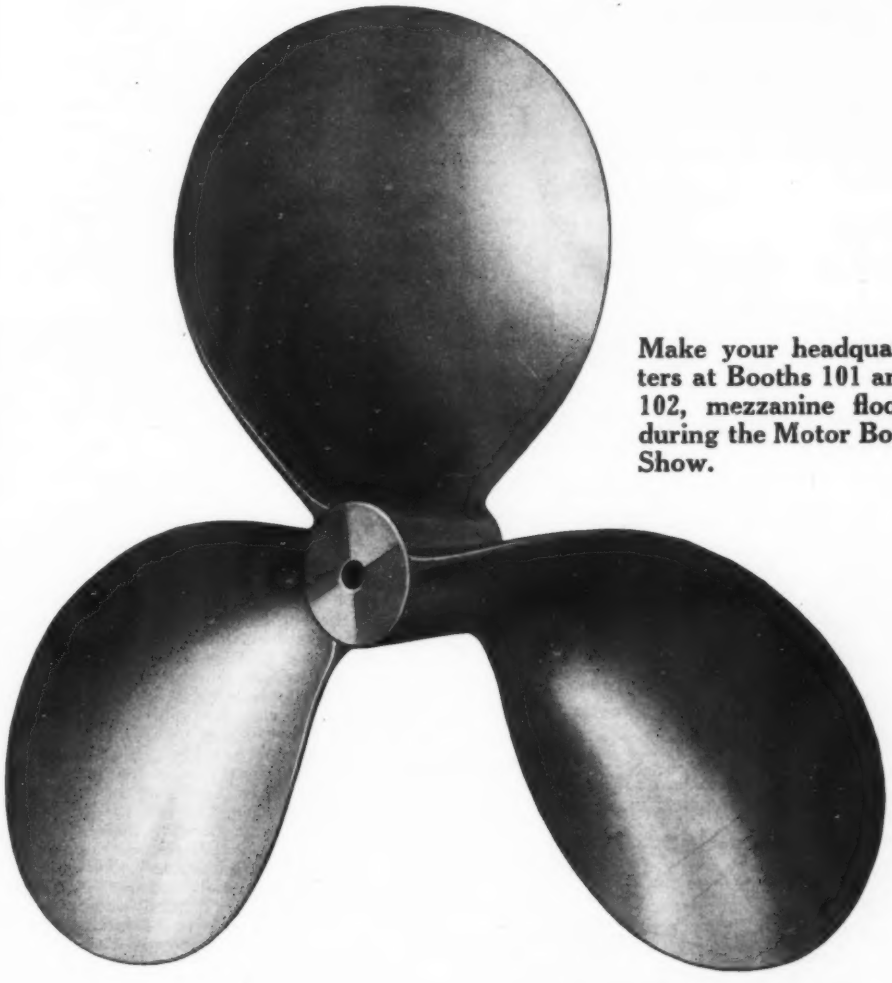
(*Continued on page 376*)

Advertising Index will be found on page 384



Cap'n Allswell says:

"Come on, you old sea dogs! Bring your troubles to the Columbian booth for a good old-fashioned ironin' out!"



Make your headquarters at Booths 101 and 102, mezzanine floor, during the Motor Boat Show.

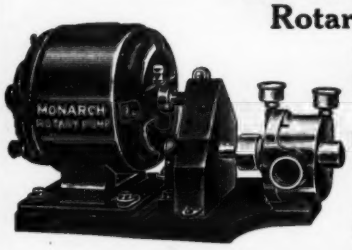
COLUMBIAN *Bronze* PROPELLERS

COLUMBIAN BRONZE CORPORATION, 208 No. Main St., Freeport, L. I., N. Y.

NEW YORK CITY SALES: 44 THIRD AVENUE

MONARCH
MARINE SPECIALTIES

Monarch Electric Rotary Pump



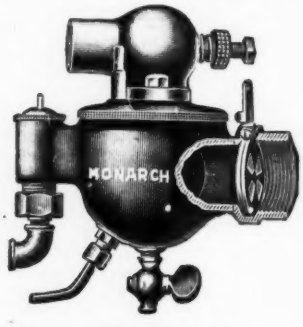
SILENT, ECONOMICAL and EFFICIENT

THIS pump is used for flushing decks, pumping bilge or furnishing circulating water for heating systems or free running water to all parts of the boat. It's portable and can be used at home, in camp or factory. Free supply of water at all times assured. This pump is also supplied with the **MONARCH ELECTRIC SELF-STARTER AND CUT OFF** which automatically starts pump running when water in bilge reaches a certain height and automatically stops the pump when bilge is clear of water. Made in the following sizes to operate on direct or alternating current: 12, 32, 110 and 120 volts. Motor 1/6 H.P. at 400 to 600 R.P.M.

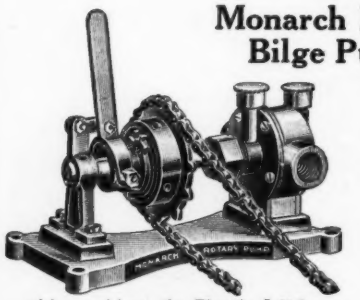
Monarch Standard Carburetor

MODEL G HORIZONTAL TYPE

(Patent Pending)



Monarch Power Bilge Pump

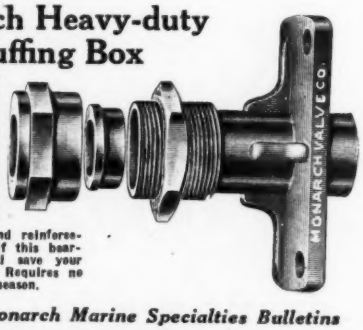


Fits all sizes of propeller-shafts.
Will not strain propeller-shaft.
Keeps your boat free of water.
May be used for flushing down decks or as an emergency fire pump.
Chain or belt drive.
We also have a complete line of Electric Pumps, with or without the Electric Self-Starter and Cut-Off.

DIMENSIONS: Length o. a., 10"; Width, 5"; Height, 6"; Pipe Connections, ¾"; Weight, 11 lbs.

Monarch Heavy-duty Stuffing Box

Size	Price
1 inch	$5.50
1⅛ "	6.00
1¼ "	7.20
1⅜ "	9.25
1½ "	12.50
1¾ "	17.50
2 "	25.00



Note the packing and reinforcements throughout. If this bearing is used it will save your hauling-out charge. Requires no packing during the season.

Write for Monarch Marine Specialties Bulletins

MONARCH VALVE & CARBURETOR CO.

112 Front Street Brooklyn, N. Y.

Tuning the Engine

(*Continued from page 374*)

IN increasing an engine's power it is best to consider first the various factors determining the power. Horse power is the product of a certain pressure, exerted against a certain total piston area, through a certain total distance, in a given time, less the power consumed within the engine by friction.

To increase the effective explosion pressure requires that a greater amount of fuel and air be burned in the same space and time, that explosives or other substances generating high pressure upon ignition be burned with the fuel, or that the fuel be burned quicker and more efficiently. Taking these up in order; to burn more fuel resolves itself into means for forcing more gaseous mixture into the cylinder in the short space of time allowed.

Supercharging is by far the best method of doing this but should not be attempted by anyone not a well qualified and experienced engineer as even the best of superchargers available today are unsuitable, as regards reliability, for anything but racing engines. To attempt to make or fit a home made supercharger is only ignorance or foolishness.

The next best thing is to reduce the fluid friction through the induction system by fitting larger carbureters, larger or better formed manifolds, increasing valve and valve port size, increasing the valve lift, and holding the valve open for a longer period of crankshaft travel.

Enlarging the carbureter and manifold size is by far the easiest but unless too small to begin with will result in erratic and unsatisfactory operation at slow speeds or low throttle. Increasing the valve and port size is limited by the metal which can be removed without cutting into the water jacket, weakening the construction, or restricting heat flow around the valve seat. Increasing the valve lift requires a special camshaft except on some overhead valve jobs where the rocker arm leverage can be changed. Increasing the duration of opening obviously requires a special camshaft.

Since a larger volume of gas is burned a correspondingly larger amount must also be discharged through the exhaust system and most of the foregoing principles also apply here. If noise is no objection the muffler should be discarded and individual exhaust pipes fitted to each cylinder. The diameter of these pipes should be the same as the exhaust port or slightly larger and the length such that the volume of the pipe is approximately four times the volume of the cylinder. Sharp bends should be avoided.

We now come to the introduction of explosives in the fuel which is a risky thing but if properly done may result in really astonishing performance. For the average compression a very good dope is one pound (approximately 1 quart) of sulphuric motor ether and 1 ounce of water free Picric acid per gallon of gasoline. More ether or acid does not result in a proportionate increase in power and may damage the engine. The Picric acid will stain everything but can be removed with warm water.

To burn the fuel quicker and more efficiently requires higher compression, correct spark advance, turbulence, or simultaneous ignition from a greater number of points.

In raising the compression consider the fuel to be used lest preignition or detonation result with attendant loss of power. A properly blended cracked gasoline will burn more rapidly and stand higher compression than a straight run gas but an improper or careless blend may be much worse. 95% water free Benzol (not benzine) can be obtained in quantities for but little more than gasoline and makes an excellent fuel, standing as much as 160 pounds compression. Water free grain alcohol will withstand more compression than any other commercially obtainable fuel, about 200 pounds in fact, but is costly and lacks heating power.

If the compression is to be increased either machine off the cylinder or cylinder head or install new pistons with higher heads. Never bolt or rivet plates in the combustion chamber or on the piston head as heat transfer is poor and the plate will become incandescent.

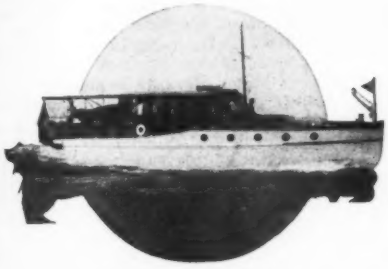
Turbulence is a factor of original design and cannot be changed without building a new engine. However, if it is possible to install more than one plug per cylinder, preferably at opposite points, a double spark magneto can be fitted and this will speed up combustion considerably. The spark should be advanced as far as possible without causing a knock and this point can be determined only by experiment.

The distance through which the pressure acts is the product of the effective stroke times the strokes per minute. Opening the exhause valve earlier shortens the effective stroke but with sufficient valve port area this need not be so great, although high speed engines require more than others.

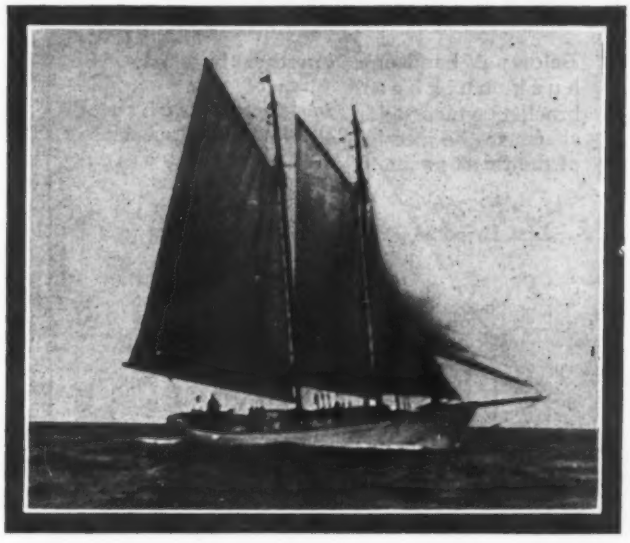
(*Continued on page 378*)

Advertising Index will be found on page 384

THE DAY OF THE OIL ENGINE IS HERE

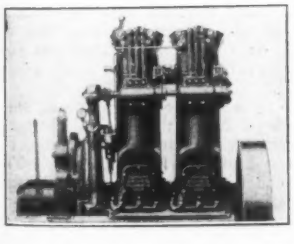


"Florence V"—50' by 14'—using a 50 H.P., 4-cylinder CUMMINS Oil Engine. Owned by Wm. H. and C. L. Sampson of Chicago.



Auxiliary schooner "Swastika" powered by a 25 H.P. 2-cylinder CUMMINS Oil Engine. Owned by U. J. Herrmann, Chicago.

Here Is the Reason They Are Changing from Gasoline to Oil!



The CUMMINS Oil Engine—full Diesel in every respect—develops 12 H.P. per cylinder at 600 R.P.M. Built in one to six cylinder units, 12 to 75 H.P. Flexible as a gasoline engine—idles indefinitely, without attention. Perfectly balanced—minimum vibration. Starts instantly, stone cold. No blow torches, cigarettes, or electrical apparatus. These many advantages are made possible by the CUMMINS simplified air injection which eliminates the expense and complication of high pressure injection air.

NO wonder many prominent boatsmen are taking out their dangerous, expensive gasoline engines! Now they can get what they have always wanted—a flexible, dependable, small size full Diesel oil engine—the CUMMINS Oil Engine!

It fits right in where the gasoline engine comes out—is the same weight, and gives the same power. Eliminates gasoline fire hazards—does away with all ignition worries—and one tank of oil gives three times the cruising radius at about one-tenth the cost of the same amount of gasoline.

The day of the oil engine is here! Write for full information about the safe, dependable, economical CUMMINS Oil Engine for your houseboat or cruiser.

CUMMINS Oil Engines

CUMMINS ENGINE COMPANY - - - - - Columbus, Indiana, U. S. A.

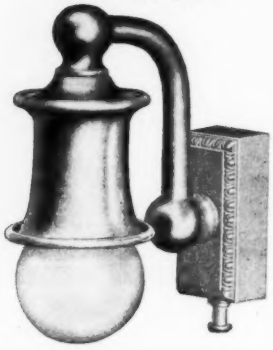
SPECIALISTS IN BETTER
MARINE HARDWARE

Below: A handsome husk bulkhead bracket which adds charm to the interior of the finest yacht.

No. 50
List Price $6.50

Another bulkhead fixture of more simple design for yachts of plainer finish or those furnished in period style

No. 171
List Price $6.50

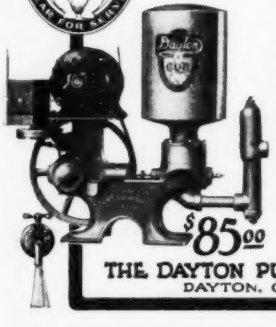


WE HAVE A LARGE ASSORTMENT FOR SELECTION

TOPPING BROTHERS
159 VARICK STREET NEW YORK

Dayton CUB "A BEAR FOR SERVICE"

Running Water
(200 GALLONS PER HOUR)



Running water, under pressure to every part of your craft the same as in your home.

Permits the use of standard plumbing fixtures. Compact—(10"x26"x22" high)—quickly installed—quiet—economical—automatic operation from any electric circuit. An outstanding value for $85.00 f. o. b. factory; a written guarantee.

Naval Architects and Builders—use our free advisory service. A "DAYTON" automatic water system for any boat. Send today for free catalogue.

$85.00

THE DAYTON PUMP & MFG. CO.
DAYTON, OHIO, U.S.A.

SCHEBLER
The World's Finest CARBURETORS

America's Standard

WHEELER-SCHEBLER CARBURETOR CO.
INDIANAPOLIS

Tuning the Engine

(*Continued from page* 376)

Increasing the r. p. m. not only increases the distance through which the pressure acts but also increases the number of explosions per unit of time and is therefore accompanied by a corresponding increase in power up to the point where the engine is usable to draw in any more gas per stroke and the explosion pressure begins to drop. This point is known as the peak on the horse power curve a characteristic one of which is shown in Fig 1. It will be noticed that the engine will run much faster but the power drops off. As long as the engine runs smoothly at point P there is no excuse for running it faster.

If, however, after making other changes, severe vibration sets in before the peak is reached, it may be advantageous to install lighter pistons and balance all reciprocating parts to the same weight. The crankshaft should be counterbalanced if facilities are at hand for putting it in dynamic balance, if not, leave well enough alone.

Going back again to fuels a few hints as to adjustment may not be amiss. A lean mixture can be identified by a reddish tinge to the exhaust flame, while too much gas will show a yellowish flame and neither will develop as much power as the correct portion, which gives a bluish and almost invisible flame. A mixture on the lean side will be much less powerful than a corresponding amount of the rich side. Although the latter is less economical. See Fig. Naturally these rules as to flame color do not apply when the fuel is doped.

R. W. H., Mansfield, O.

You Should Attend the Show

(*Continued from page* 85)

feminine gender than at a musical comedy or burlesque show costing many times the price of five gallons of gasoline. There will be good music and spot lights even if the beauties don't dance. However, the beauties can dance when in their element and do it gracefully and in perfect time to the motion of the water. You can, "Ask the man who owns one," and he may be so kind as to prove it to you next summer. Whether your boat is a palatial yacht or a humble outboard powered row boat, you will see many things of interest at the Motor Boat Show.

The boat owner and builder can get a vast amount of information on boats and their equipment and will see all the latest developments in boats, engines, and accessories. He can talk with the men who build and use them. The biggest men in the industry will be there, ready to explain their product and help you solve the knotty problems of installation and equipment. Men who use boats and engines will be all around you and ready to spin a yarn whenever the salesmen go out for a drink. Some of them have a great line of sales talk and if you are on the look out you may see one of the greatest curiosities of the age; a windmill run by water power.

What can be prettier than the first sight of all the boats as you come up the steps from the main entrance? All heading towards the front, resplendent in the utmost of the finishers art, flags flying and the band playing. You can walk around among these boats and go aboard them, look at the engine and the galley, open and close the locker doors and if no one is looking, inspect the cellar (bilge). Throw in the gear and put the steering wheel hard over, and for a few minutes, think that you already own her. There will be

(*Continued on page* 380)

MARINOBILE

The FORD Powered Motor Boat

Has proven during the past season that it can go and keep going for any length of time under full load in sizzling hot summer weather without having overheating or lubricating trouble. Saying this, is saying a lot.

Two sizes: 16'9" model, $995; 18' model, $1185 f. o. b. Kearny, N. J.

See our exhibit at the New York Motor Boat Show, space No. 4, Mezzanine, or write for catalog and specifications.

T. J. BUTLER
SHOWROOM AND SERVICE STATION:
470 PASSAIC AVE. KEARNY, N. J.

Advertising Index will be found on page 384

THE RED BANK STANDARDIZED THIRTY-FOOT CRUISER

You'll Appreciate Its Value

WHETHER your hobby is deep sea fishing or just cruising you could not want a better or finer boat than the Red Bank thirty-foot standardized cruiser. It is acknowledged by connoisseurs of boats as being unusually seaworthy for its size and one of the finest values in standardized boats on the market today. Superb craftsmanship characterizes its every detail. It is ruggedly constructed, yet beautiful in lines and runs with the gracefulness of a yacht. The cabin is roomy and furnished with every convenience.

Complete Hull $4,500
Fifteen Miles per Hour $5,850
Twenty-two Miles per Hour . . $7,500
Twenty-seven Miles per Hour . $7,900

Write today for full details

We cordially invite visitors to the New York Motor Boat Show to come to our factory and see how RED BANK cruisers are built. Our plant and yard is only seventy minutes from New York.

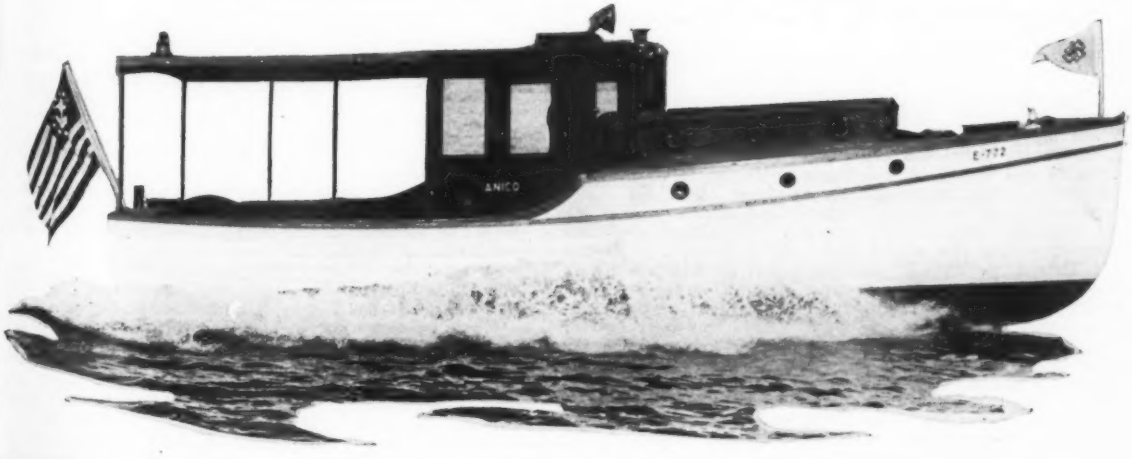
RED BANK YACHT WORKS

Pierre A. Proal, President

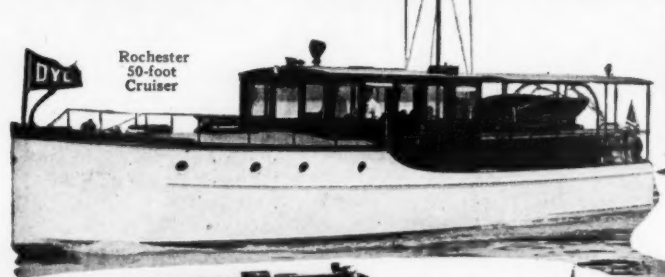
RED BANK NEW JERSEY

Telephone: Red Bank 840

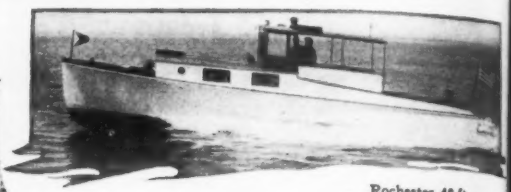
FLORIDA AGENT: J. A. COOK, SARASOTA, FLORIDA



ROCHESTER BOAT WORKS, Inc.

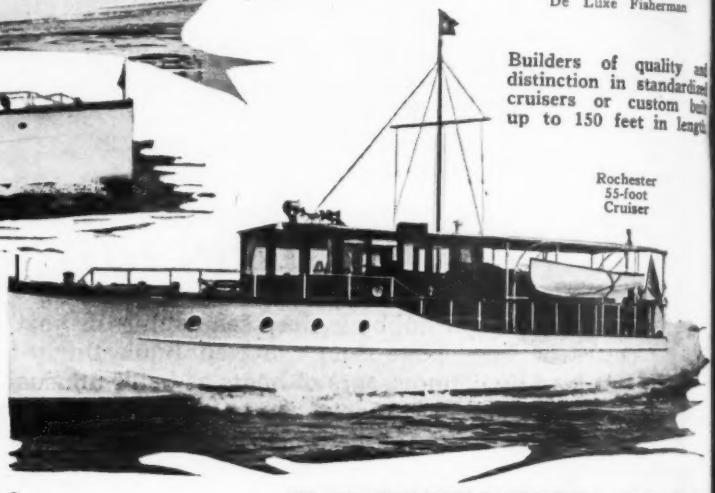


Rochester 50-foot Cruiser


Rochester 40-ft. De Luxe Fisherman

45-ft. Cruiser Rochester

Builders of quality and distinction in standardized cruisers or custom built up to 150 feet in length


Rochester 55-foot Cruiser

Standard Cruisers, 33-36-40-45-50-55 and 65'. Runabouts, 24-26-28 and 30'.

ORIGINATORS of the Standardized enclosed bridge deck.

Foreign and domestic territory open for responsible dealers.

10 Charlotte Station ROCHESTER, N. Y.

You Should Attend the Show

(*Continued from page 378*)

no objections to your bringing your friends along for the trial spin. After you have tried them all out, make your selection and then look over the engines lined up on the float at the sides. You may not be able to choose the one best suited to your pocket book and your needs but you can find an engine here that will drive any kind of a boat at any speed within reason, or one that you can afford to buy.

The accessories are on the upper deck and you can get another hour or two of pleasure there. You will find everything that goes on a boat or that is used in the construction, displayed in an attractive manner, and there are always useful souvenirs to be had from the exhibitors. If you are not timid, take hold of some of the spark plugs that are shown in operation and get the kick of your life, free. You can test your strength against that of marine glue, and if you like to argue, tell the salesman that his line is all wrong and that whatever he is demonstrating will not work out in practice as it does in the demonstration. An argument always draws a crowd and that is what the salesman wants.

When you first went aboard a boat you joined the great motor boating fraternity, which is not a secret order. To hold office you must own a boat and pay an initiation fee which is the cost of the boat. The dues are the upkeep, running expenses and the pass word, "Fill up the tank." Associate members (non boat owners) have all privileges except that of holding the office of Captain. After joining any fraternal order you attend the meetings more or less regularly and if elected a delegate to the state or national convention would not miss it for anything. You can attend the meetings at the club or aboard the boats all year round and when the national convention of the Order of Motor Boatmen meets, you are all chosen as a delegate.

If distance or inability prevents you from attending in person, you can attend by proxy. Motor Boating publishes a very interesting and well illustrated account of the event immediately after the show opens. Read this over two or three times and then put on your amber glasses, turn the lights low and look at the pictures with a little imagination and you will almost think that you are actually aboard the boats. Don't neglect the advertising pages. Practically every exhibitor at the show will advertise in this issue and they use more space than ordinarily. You can get a lot of information from the ads., and if interested in any particular article, write for literature.

An afternoon or evening among the boats will well repay anyone at all interested, for the trip to New York. Whether an owner or builder, the latest ideas in construction and equipment are worthy of your attention. You may see just the thing that has been troubling you all worked out, or get an idea that will help to make your boat more reliable or more comfortable. Fitting out time will soon be here and you can get a lot of good advice and information on paints and varnishes and their application from the men in charge of the manufacturers' booths.

If you are new at the game or have never attended the Motor Boat Show before, you should do so this year. The Grand Central Palace is centrally located and within easy reach from all the rail road stations. Good restaurants and hotels will be found close at hand and the theater district is not far off the course. Go to the Motor Boat Show in the afternoon and to the theater at night. Then you can dine and catch the paper train home in time for business the next day.

W. B. M., Newburgh, N. Y.

Picking the Wheel

(*Continued from page 352*)

Two illustrations of the use of the chart are given.

Suppose it is desired to use a 4-cylinder engine 5½ x 6¼ inches. The piston displacement is 640 cubic inches. Assume 900 *r.p.m.* as the maximum speed. The curve of 900 *r.p.m.* intersects 640 cubic inches at 12,350 ($=d^2p$). This engine will therefore turn about 900 *r.p.m.* with any of the following wheels: 22-in. x 25-in., 24-in. x 21-in., 26-in. x 18-in., or 28-in. x 15-in. Assuming that the boat will make about 11 knots, and allowing 25 per cent slip, the 24-in. x 21-in. would be the nearest commercial size.

Or, assuming a heavy boat that will make only about 8 knots, and allowing 25 per cent slip, the 28-in. x 15-in. would fill the bill. It has not been found that the pitch ratio has as much influence on the performance of motorboat propellers as is the case with larger wheels.

In case of a 4-cylinder engine, 4¾ x 5½ inches, the piston displacement is 390 cubic inches. For 1,000 *r.p.m.* the propeller would have $d^2p = 7{,}100$, and it might be any of the following: 18-in. x 22-in., 20 x 18-in., or 22-in. x 15-in., depending on hull characteristics and expected speed of boat.

Advertising Index will be found on page 384

Red Wing Thorobred
THE MOTOR WITH POWER TO SPARE

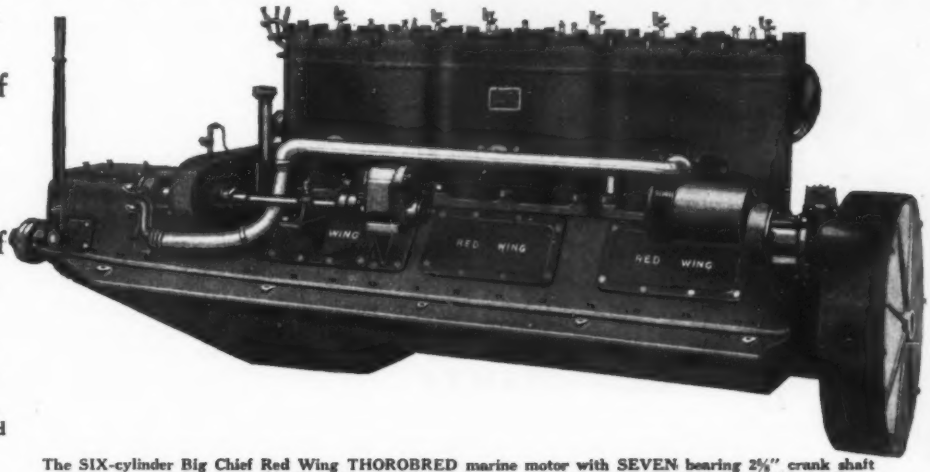
THE SIX CYLINDER RED WINGS ARE HERE!

TWO SIZES (5"x7") AND (5¾"x7") NOW READY—AND A SMALLER SIX (4½"x6") FOLLOWS FOR EARLY SPRING DELIVERY

Illustration shows

Big Chief Six
5"x7"
85-110 H.P.
and
Big Chief Special Six
5¾"x7"
110-150 H.P.

Medium duty and high speed types.



The SIX-cylinder Big Chief Red Wing THOROBRED marine motor with SEVEN bearing 2⅝" crank shaft and 185 square inches main bearing support; Paragon reverse gear running in oil bath; double ignition; complete pressure feed oiling system with patented submerged type Red Wing oil pump, and two unit twelve volt electric starting system with flywheel housing. Gray iron or aluminum base types. Designed for twin screw.

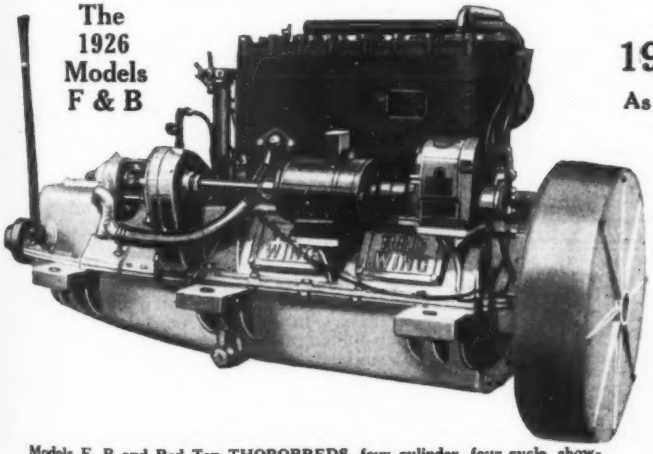
OFFERING SMOOTHER and MORE ABUNDANT POWER

IT was inevitable that Red Wing should bring out a SIX. So persistent were the demands of boat owners, not merely for a six-cylinder motor, but for a RED WING SIX, that we have met this demand with two models for the larger cruisers and commercial boats, and also with a smaller high speed SIX adapted for the medium sized cruiser or speedy runabout.

These Sixes offer nothing startling, new or untried. They do represent the cumulation of 25 years of successful marine engine building experience, during which time THOROBRED double and four-cylinder motors have become famous in every corner of the globe. The Red Wing SIXES offer the same reliable, dependable and efficient qualities, except in smoother and more abundant form.

Descriptive matter mailed on request. Kindly mention size and type of boat.

The 1926 Models F & B



Models F, B and Red Top THOROBREDS, four cylinder, four cycle, showing 1926 refinements consisting of complete flywheel enclosure on electric starter types, and conveniently mounted Bosch magneto, generator and water pump. Pressure feed oiled by patented submerged type Red Wing oil pump.

THE

1926 Red Wing Line

As announced, Block C, Main Floor, New York Motor Boat Show
11 Sizes—4 to 150 H.P.

Model K 4-5 h.p. 1 cyl. 3¼ x 4¼
Model KK 7-8 h.p. 2 cyl. 3¼ x 4¼
Model D 10-14 h.p. 4 cyl. 2¾ x 4
Model AA 18-24 h.p. 4 cyl. 3¼ x 4¼
Model F 28-36 h.p. 4 cyl. 4 1-16 x 5
Model B 32-40 h.p. 4 cyl. 4½ x 5
RED TOP 40-50 h.p. 4 cyl. (high speed) 4½ x 5
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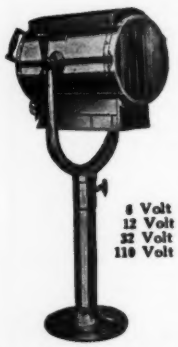

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National Association Helps Ways and Means Committee

A delegation representing the National Association of Boat and Engine Manufacturers consisting of Henry R. Sutphen, President, William J. Parslow of the Consolidated Shipbuilding Corporation, and Ira Hand, Secretary of the Association, appeared before the Ways and Means Committee in Washington, and made a direct appeal for the elimination of the user's tax on domestic built pleasure boats, of over five tons net, and over 32 feet in length. The brief filed with the Ways and Means Committee supported their statements, and at the same time contained their arguments regarding the imposition of a proper tax upon the use of foreign built pleasure boats, owned and operated in United States waters, by American citizens.

The ways and Means Committee has recommended that the user's tax on domestic built boats be eliminated, and that a footage tax at the old rate be applied to pleasure boats only if foreign built. The bill was passed in this fashion, by the House of Representatives, and referred to the Senate, where it was placed in the hands of the Senate Finance Committee. The National Association have requested to be heard before the Finance Committee, but this was denied, since their arguments had already been presented before the Ways and Means Committee.

The same delegation representing the National Association again on January 11, interviewed members of the Senate Finance Committee, and were assured by Senator Reed, that their arguments and brief would be given proper consideration by the Committee shortly. In the meantime, owners of a number of foreign built boats, through counsel, had filed a brief with the Finance Committee, appealing for the entire abolition of the special tax on the use of foreign built boats. Later, on January 11, the Finance Committee in it's good judgement, recognizing the justice of the Committee's plea, voted to double the house rate on the use of foreign built pleasure boats. The bill will shortly go out of the Finance Committee for presentation before the Senate, and will then later be placed in the hands of the Conference Committee, consisting of leading members of the House, Ways and Means Committee, and the ranking members of the Senate Finance Committee. The conferees will iron out any differences between the Senate and House revenue bills, and the new revenue act will then be in shape for final passage, adoption, and the signatures of the President.

The National Association of Boat and Engine Manufacturers has made a determined fight in this case, on behalf of the industry, and individual boat owners. The situation with regard to foreign built pleasure craft, and the competition that our builders have been facing from this direction, is better understood at this time by Congress, than it was a short time ago. Not only are large yachts of 150 feet or more being built in German, Danish, Dutch and English ship yards, chiefly for the purpose of savings that can be effected on account of the low rate in the European plants, but smaller boats over five net tons, and yet not large enough to make the North Atlantic passage under their own power, are being shipped on the decks of steamers, to nearby points, such as Montreal, Halifax, Cuba, and the West Indies, from which points it is a comparatively easy matter for these smaller craft to run into United States waters. All of this is being done without the payment of duty or tax. Every yacht builder, engine builder, and manufacturer of marine equipment in this country, as well as allied industries and trades are vitally affected by this situation.

It is apparent that Congress and the Treasury Department are determined to keep a close watch on the situation, now that their attention has been directed to it, by the National Association. It is further felt that if in the near future, it becomes necessary to either increase the rate of this tax, or to place upon the statutes some other form of legal deterrent against this unfair competition, Congress is prepared to do so. Purchasers of foreign built yachts must, therefore, realize that from now on, these boats will be under more or less of a cloud as to their future. Starting with the fight for the abolition of the ten percent tax, which the Association carried to a successful conclusion in 1924, this latest work that the organization has done on behalf of the industry, is deserving of the support of the many builders and manufacturers, who are not affiliated with the National Association, and it is suggested that if you, as a manufacturer or builder, approve of these efforts in your behalf, you make application at once to join the National Association of Boat and Engine Manufacturers in order that in the future, your support may be counted upon, in all matters of this kind, that affect the industry, legislative or otherwise.

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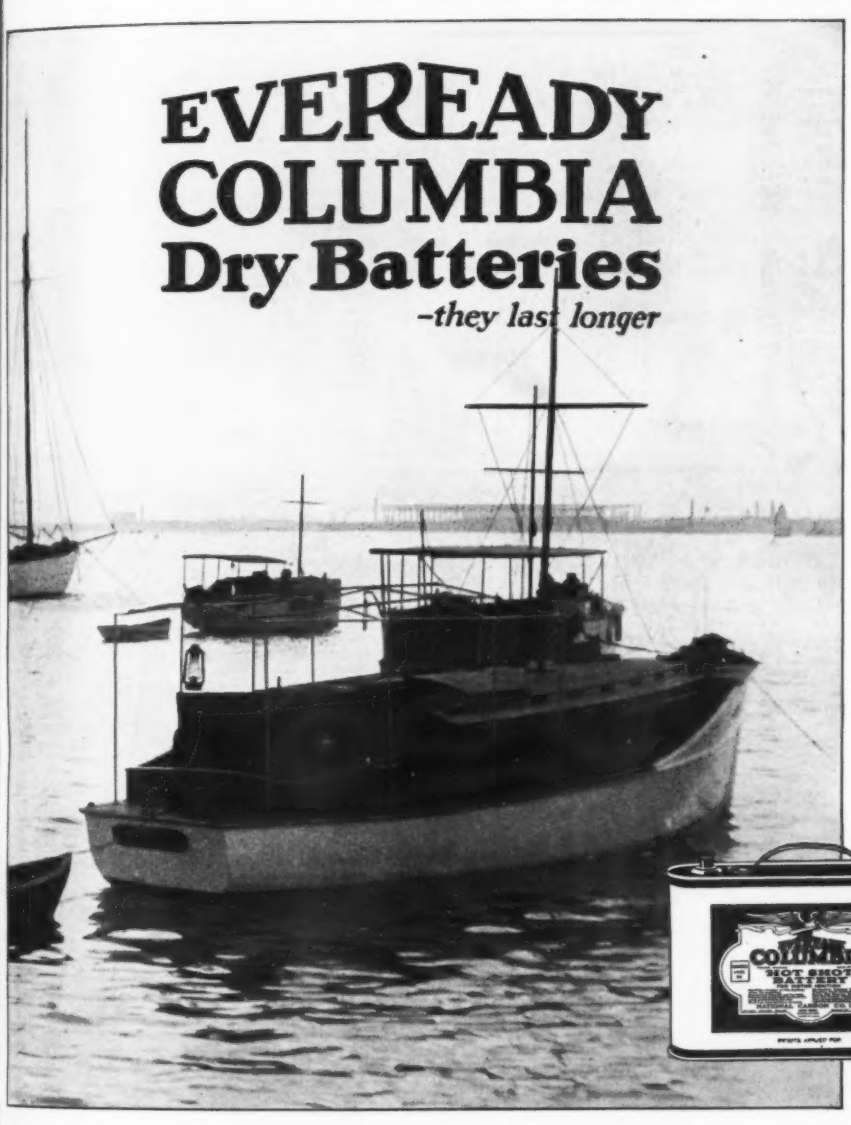
For crashing, spit-fire sparks



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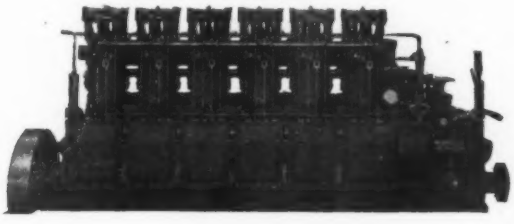

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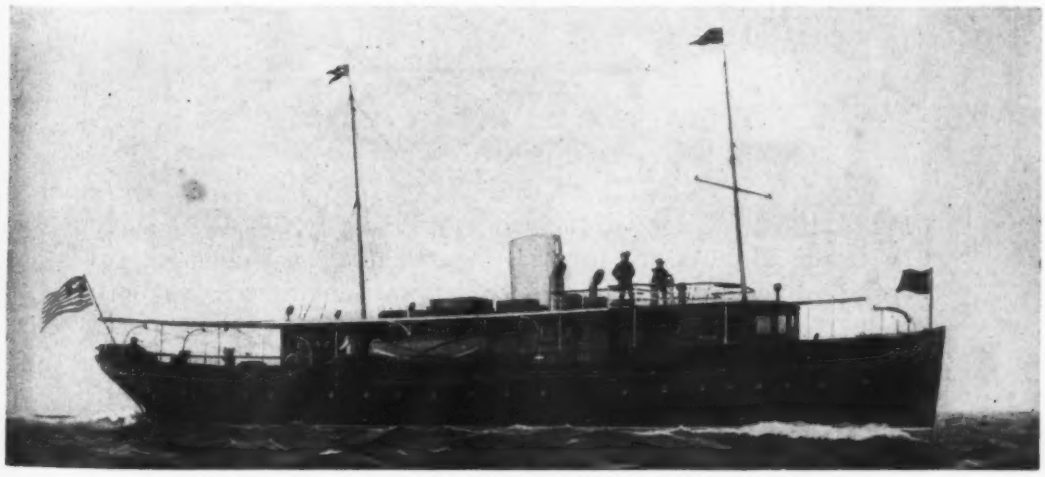

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